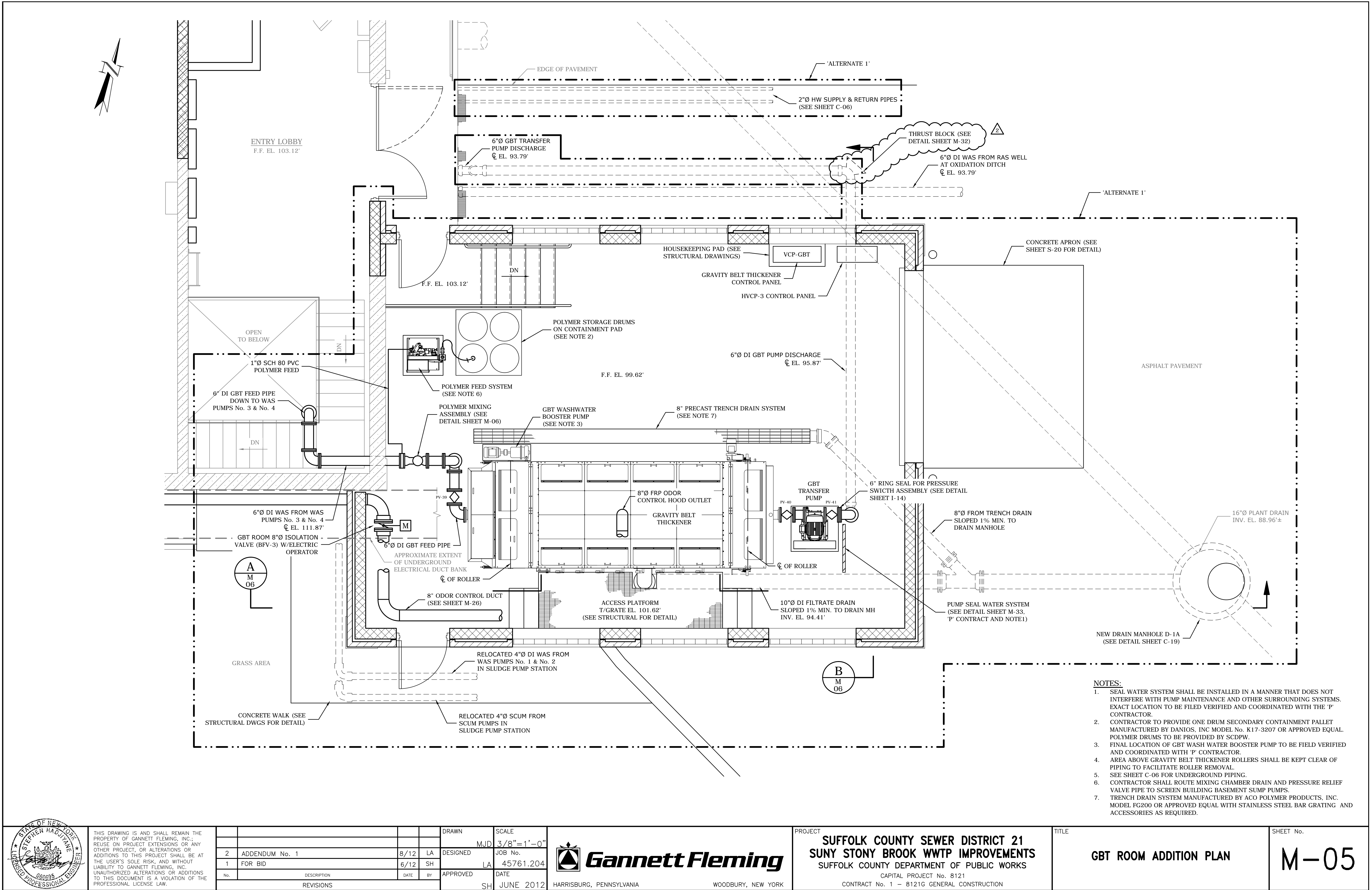


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2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH

DRAWN	SCALE
MJD	3/8"=1'-0"
DESIGNED	JOB No.
LA	45761.204
APPROVED	DATE
SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 1 - 8121G GENERAL CONSTRUCTION

TITLE
GBT ROOM ADDITION PLAN

SHEET No.
M-05

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2	ADDENDUM No. 1	8/12	LA	DESIGNED	JOB No. 45761.204
1	FOR BID	6/12	SH	APPROVED	DATE JUNE 2012
No.	DESCRIPTION	DATE	BY	APPROVED	DATE
REVISIONS					

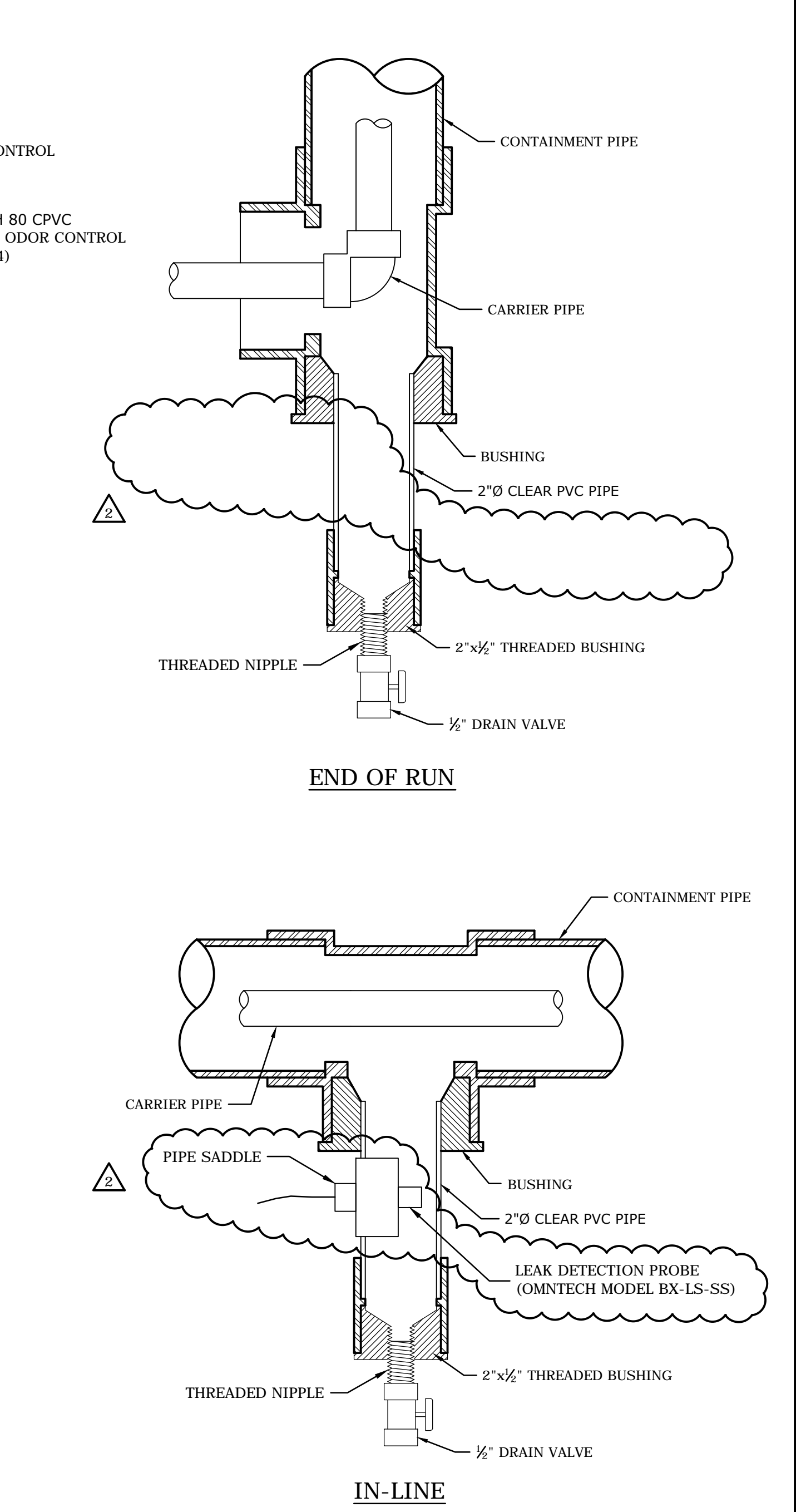
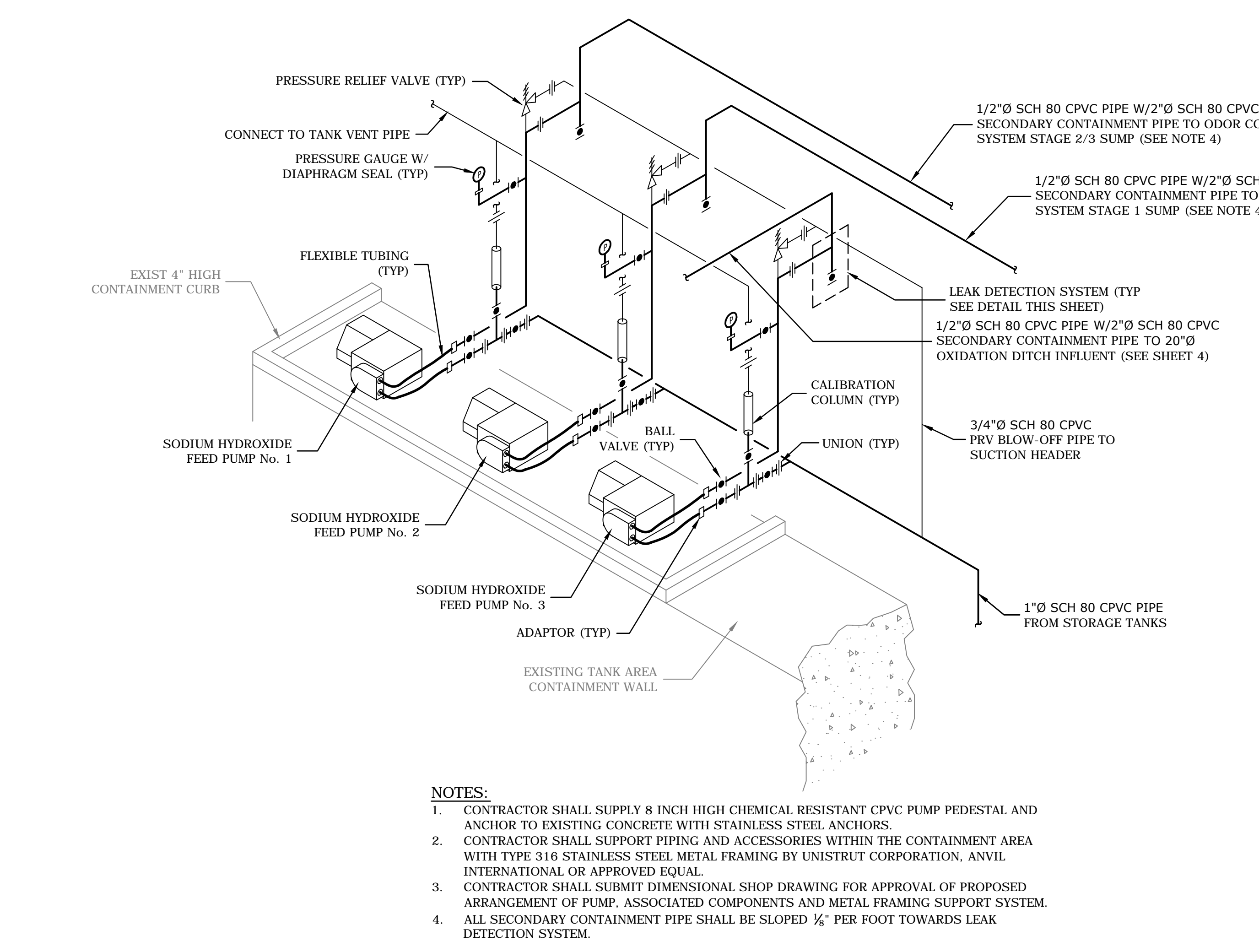
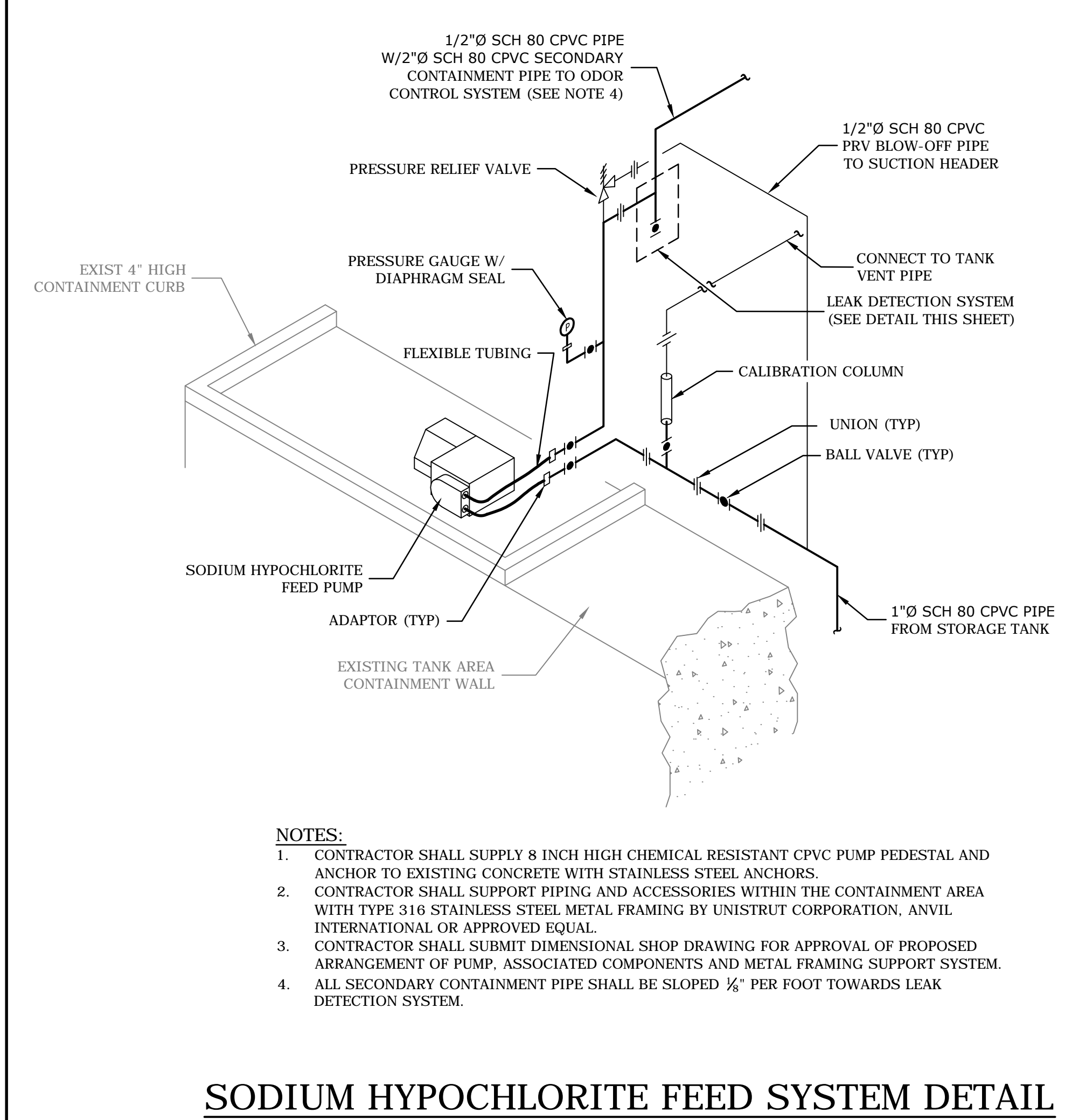
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MJD	NONE
DESIGNED	JOB No. 45761.204
LA	DATE JUNE 2012
APPROVED	DATE JUNE 2012
SH	DATE JUNE 2012



PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 1 - 8121G GENERAL CONSTRUCTION

TITLE
**SCREEN BUILDING
CHEMICAL FEED PIPING
DIAGRAMS**

SHEET No.
M-31



- NOTES:**
- PITCH DISCHARGE PIPING TO LEAK DETECTION SYSTEM.
 - PROVIDE TUBING FROM LEAK DETECTION SYSTEM DRAIN VALVE TO APPROXIMATELY 2 FEET ABOVE FINISHED FLOOR INSIDE THE CONTAINMENT AREA.
 - PROVIDE UNIONS AT APPROXIMATELY 1 FOOT ABOVE THE TOP OF THE CALIBRATION COLUMNS SO THAT THE PIPING CAN BE TEMPORARILY REMOVED TO FILL THE COLUMNS FROM THE TOP.

DRAWING INDEX

ELECTRICAL

SHEET No.	TITLE
E-01	DRAWING INDEX
E-02	GENERAL NOTES AND ABBREVIATIONS
E-03	ELECTRICAL SYMBOLS
E-04	LOCATION PLAN
E-05	EXISTING SITE POWER PLAN SHEET 1
E-06	EXISTING SITE POWER PLAN SHEET 2
E-07	EXISTING SINGLE LINE DIAGRAM SHEET 1
E-08	EXISTING SINGLE LINE DIAGRAM SHEET 2
E-09	EXISTING SINGLE LINE DIAGRAM SHEET 3
E-10	EXISTING MCC'S ELEVATION AND SCHEDULE SHEET 1
E-11	EXISTING MCC'S ELEVATION AND SCHEDULE SHEET 2
E-12	EXISTING MCC'S ELEVATION AND SCHEDULE SHEET 3
E-13	EXISTING PANEL SCHEDULES
E-14	SCREEN BUILDING LOWER LEVEL DEMOLITION PLAN
E-15	SCREEN BUILDING MAIN FLOOR DEMOLITION PLAN
E-16	OXIDATION DITCH DEMOLITION PLAN
E-17	SLUDGE PUMP STATION LOWER LEVEL DEMOLITION PLAN
E-18	SLUDGE PUMP STATION MAIN FLOOR DEMOLITION PLAN
E-19	SITE POWER PLAN SHEET 1
E-20	SITE POWER PLAN SHEET 2
E-21	UNDERGROUND DUCT BANK SCHEDULE
E-22	UNDERGROUND DUCT BANK SCHEDULES AND DETAILS
E-23	STAND-BY GENERATOR LOCATION PLAN
E-24	SINGLE LINE DIAGRAM SHEET 1
E-25	SINGLE LINE DIAGRAM SHEET 2
E-26	SINGLE LINE DIAGRAM SHEET 3
E-27	MCC'S ELEVATION AND SCHEDULE SHEET 1
E-28	MCC'S ELEVATION AND SCHEDULE SHEET 2
E-29	MCC'S ELEVATION AND SCHEDULE SHEET 3
E-30	PANEL SCHEDULES
E-31	SERVICE BUILDING POWER AND INSTRUMENTATION PLAN
E-32	SERVICE BUILDING INSTRUMENTATION RISER DIAGRAM
E-33	SCREEN BUILDING LOWER LEVEL POWER PLAN
E-34	SCREEN BUILDING LOWER LEVEL INSTRUMENTATION PLAN
E-35	SCREEN BUILDING MAIN FLOOR POWER PLAN
E-36	SCREEN BUILDING MAIN FLOOR INSTRUMENTATION PLAN
E-37	SCREEN BUILDING INSTRUMENTATION RISER DIAGRAM
E-38	GBT ROOM ADDITION POWER PLAN
E-39	GBT ROOM ADDITION LIGHTING PLAN
E-40	GBT ROOM ADDITION INSTRUMENTATION PLAN
E-41	GBT ROOM AND ODOR CONTROL SYSTEM INSTRUMENTATION RISER DIAGRAM
E-42	SCREEN BUILDING & GBT ROOM ADDITION SECURITY SYSTEM RISER DIAGRAM
E-43	OXIDATION DITCH POWER PLAN
E-44	OXIDATION DITCH INSTRUMENTATION PLAN
E-45	SLUDGE PUMP STATION LOWER LEVEL POWER PLAN
E-46	SLUDGE PUMP STATION LOWER LEVEL INSTRUMENTATION PLAN
E-47	SLUDGE PUMP STATION MAIN FLOOR & FINAL CLARIFIERS POWER PLAN
E-48	SLUDGE PUMP STATION MAIN FLOOR & FINAL CLARIFIERS INSTRUMENTATION PLAN

ELECTRICAL

SHEET No.	TITLE
E-49	OXIDATION DITCH AND SLUDGE PUMP STATION INSTRUMENTATION RISER DIAGRAM
E-50	EFFLUENT PUMP STATION POWER AND INSTRUMENTATION PLAN
E-51	INFLUENT PUMP STATION AND HEADWORKS POWER AND INSTRUMENTATION PLAN
E-52	INFLUENT AND EFFLUENT PUMP STATIONS INSTRUMENTATION RISER DIAGRAMS
E-53	DENITRIFICATION FACILITY SINGLE LINE DIAGRAM
E-54	DENITRIFICATION FACILITY MCC LAYOUT AND SCHEDULE
E-55	DENITRIFICATION FACILITY PANEL SCHEDULES
E-56	DENITRIFICATION FACILITY LOWER LEVEL POWER PLAN
E-57	DENITRIFICATION FACILITY LOWER LEVEL LIGHTING PLAN
E-58	DENITRIFICATION FACILITY LOWER LEVEL INSTRUMENTATION PLAN
E-59	DENITRIFICATION FACILITY MAIN FLOOR POWER PLAN
E-60	DENITRIFICATION FACILITY MAIN FLOOR LIGHTING PLAN
E-61	DENITRIFICATION FACILITY MAIN FLOOR INSTRUMENTATION PLAN
E-62	DENITRIFICATION FACILITY INSTRUMENTATION RISER DIAGRAM
E-63	METHANOL STORAGE AREA POWER AND INSTRUMENTATION PLAN
E-64	DENITRIFICATION FACILITY AND METHANOL STORAGE AREA SECURITY SYSTEM RISER DIAGRAM
E-65	TYPICAL PROCESS MOTOR CONTROL WIRING DIAGRAMS SHEET 1
E-66	TYPICAL PROCESS MOTOR CONTROL WIRING DIAGRAMS SHEET 2
E-67	TYPICAL PROCESS MOTOR CONTROL WIRING DIAGRAMS SHEET 3
E-68	TYPICAL PROCESS MOTOR CONTROL WIRING DIAGRAMS SHEET 4
E-69	PMCS WIRING DIAGRAM
E-70	MISCELLANEOUS ELECTRICAL DETAILS SHEET 1
E-71	MISCELLANEOUS ELECTRICAL DETAILS SHEET 2
E-72	MISCELLANEOUS ELECTRICAL DETAILS SHEET 3
E-73	DENITRIFICATION FACILITY GROUNDING SINGLE LINE DIAGRAM
E-74	AUTOMATIC TRANSFER SWITCH CONTROLLER
E-75	LV SWITCHGEAR CONTROL MODIFICATIONS EXISTING SWITCHGEAR DETAIL
E-76	LV SWITCHGEAR CONTROL MODIFICATIONS MAIN SOURCE TAP DETAIL
E-77	LV SWITCHGEAR CONTROL MODIFICATIONS SECTION 1 TERMINAL BLOCK TERMINATIONS
E-78	LV SWITCHGEAR CONTROL MODIFICATIONS GENERATOR BREAKER CLOSE CIRCUIT
E-79	LV SWITCHGEAR CONTROL MODIFICATIONS STAND-BY SOURCE TAP DETAIL
E-80	LV SWITCHGEAR CONTROL MODIFICATIONS SECTION 2 UTILITY BREAKER
E-81	LV SWITCHGEAR CONTROL MODIFICATIONS SECTION 5 GENERATOR BREAKER

FIRE ALARM

SHEET No.	TITLE
FA-01	FACILITY LOCATION PLAN
FA-02	EXISTING FIRE ALARM RISER DEMOLITION AND FIRE ALARM SYMBOLS
FA-03	FACILITY FIRE ALARM BLOCK DIAGRAM
FA-04	SERVICE BUILDING GROUND FLOOR FIRE ALARM PLAN
FA-05	SERVICE BUILDING MEZZANINE LEVEL & GENERATOR FIRE ALARM PLAN
FA-06	SERVICE BUILDING FIRE ALARM RISER DIAGRAM
FA-07	SCREEN BUILDING AND GBT ROOM ADDITION FIRE ALARM PLANS
FA-08	SCREEN BUILDING AND GBT ROOM ADDITION FIRE ALARM RISER DIAGRAM
FA-09	SLUDGE PUMP STATION FIRE ALARM PLAN
FA-10	SLUDGE PUMP STATION FIRE ALARM RISER DIAGRAM
FA-11	INFLUENT PUMP STATION FIRE ALARM PLAN AND RISER DIAGRAM
FA-12	DENITRIFICATION FACILITY FIRE ALARM PLANS
FA-13	DENITRIFICATION FACILITY FIRE ALARM RISER DIAGRAM



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SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA

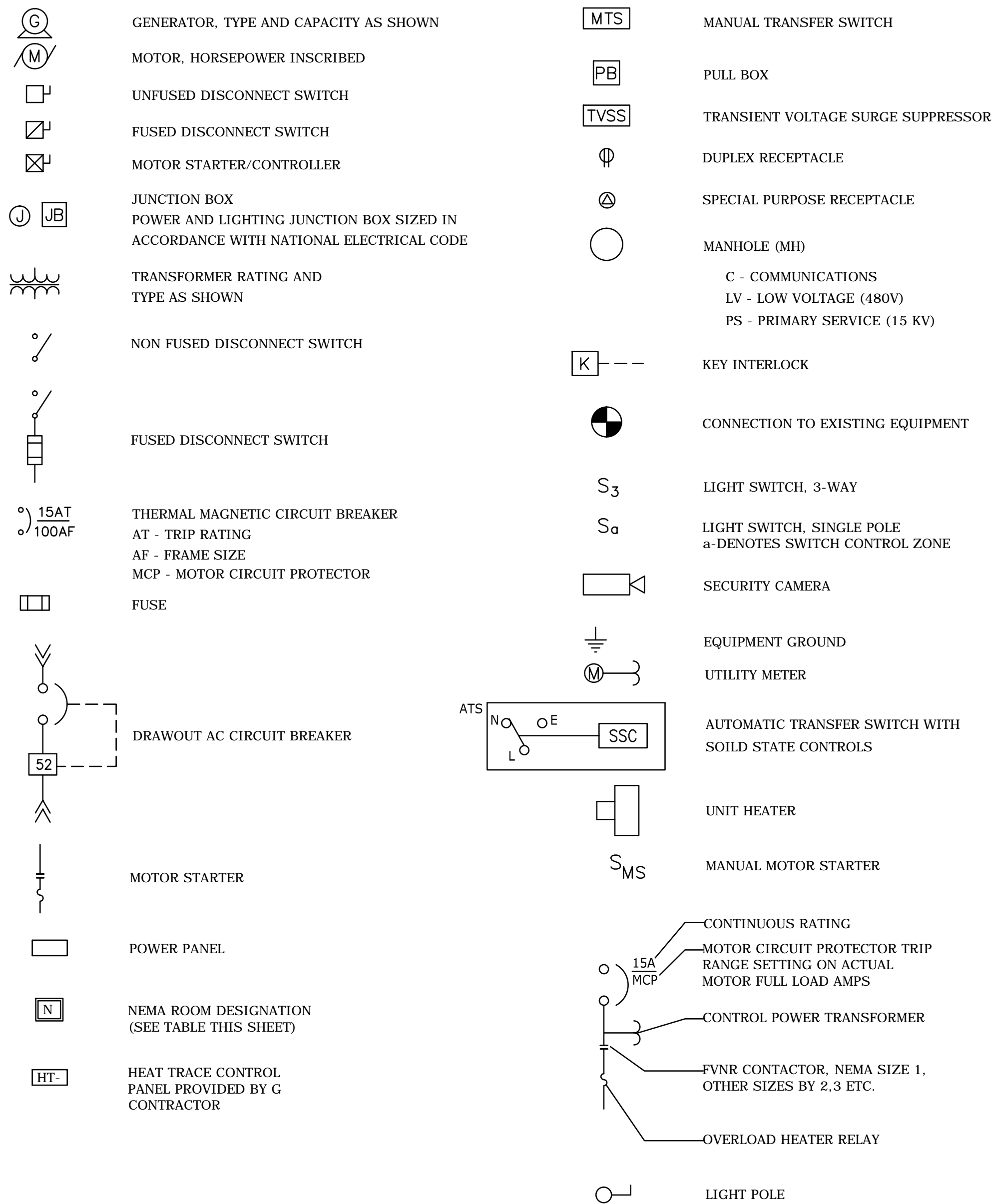
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


PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 – 8121E ELECTRICAL

TITLE
DRAWING INDEX

SHEET No.
E-01

GENERAL POWER

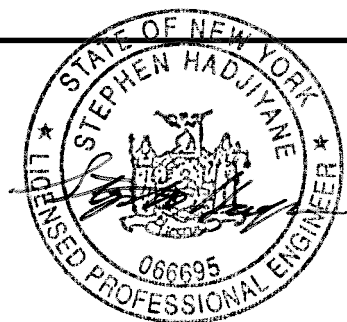


NEMA DESIGNATION SCHEDULE				
NEMA ENCLOSURE RATING	SYMBOL	LOCATION TYPE	ELECTRICAL RACEWAY INSTALLATION AND TYPE	NOTES
NEMA 1		INTERIOR LOCATION	EXPPOSED WIRING; RGS TYPE CONDUIT WITH CAST METAL DEVICE BOXES	NOTE 1
NEMA 12		INTERIOR INDUSTRIAL LOCATION	EXPPOSED WIRING; RGS TYPE CONDUIT WITH CAST METAL DEVICE BOXES	NOTE 1
NEMA 3R		EXTERIOR LOCATION 	EXPPOSED WIRING; PVC/RGS TYPE CONDUIT WITH NEMA 3R DEVICE BOXES	NOTE 1
NEMA 4X		CORROSION RESISTANT LOCATION	EXPPOSED WIRING; PVC/RGS COATED CONDUIT WITH PVC COATED DEVICE BOXES.	NOTE 1
NEMA 7		CLASS 1, DIVISION 1	EXPPOSED WIRING; PVC/RGS COATED CONDUIT WITH PVC COATED NEMA 7 DEVICE BOXES	NOTE 1

NEMA DESIGNATION SCHEDULE NOTES:

NEMA DESIGNATIONS ARE INTENDED FOR SPECIFICATION SECTION 16 ELECTRICAL SUPPLIED SYSTEMS AND ARE NOT INTENDED FOR ELECTRICAL MATERIALS SUPPLIED BY OTHER SPECIFICATION SECTIONS, EXCEPT TO BE USED AS A GUIDELINE FOR OTHER SPECIFICATION SECTIONS WHICH REQUIRE NEMA ENCLOSURE DIRECTION ASSISTANCE.

1. REFER TO PLAN DRAWINGS FOR FEEDER INSTALLATION REGARDING, CONCEALED, EXPOSED, EMBEDDED OR UNDERGROUND INSTALLATION.
2. EMBEDDED FLOOR SLAB WIRING SHALL BE RGS TYPE CONDUIT. WHEN PENETRATING THROUGH THE FLOOR, THE RGS TYPE CONDUIT SHALL BE TRANSITIONED TO RGS/PVC COATED TYPE CONDUIT.



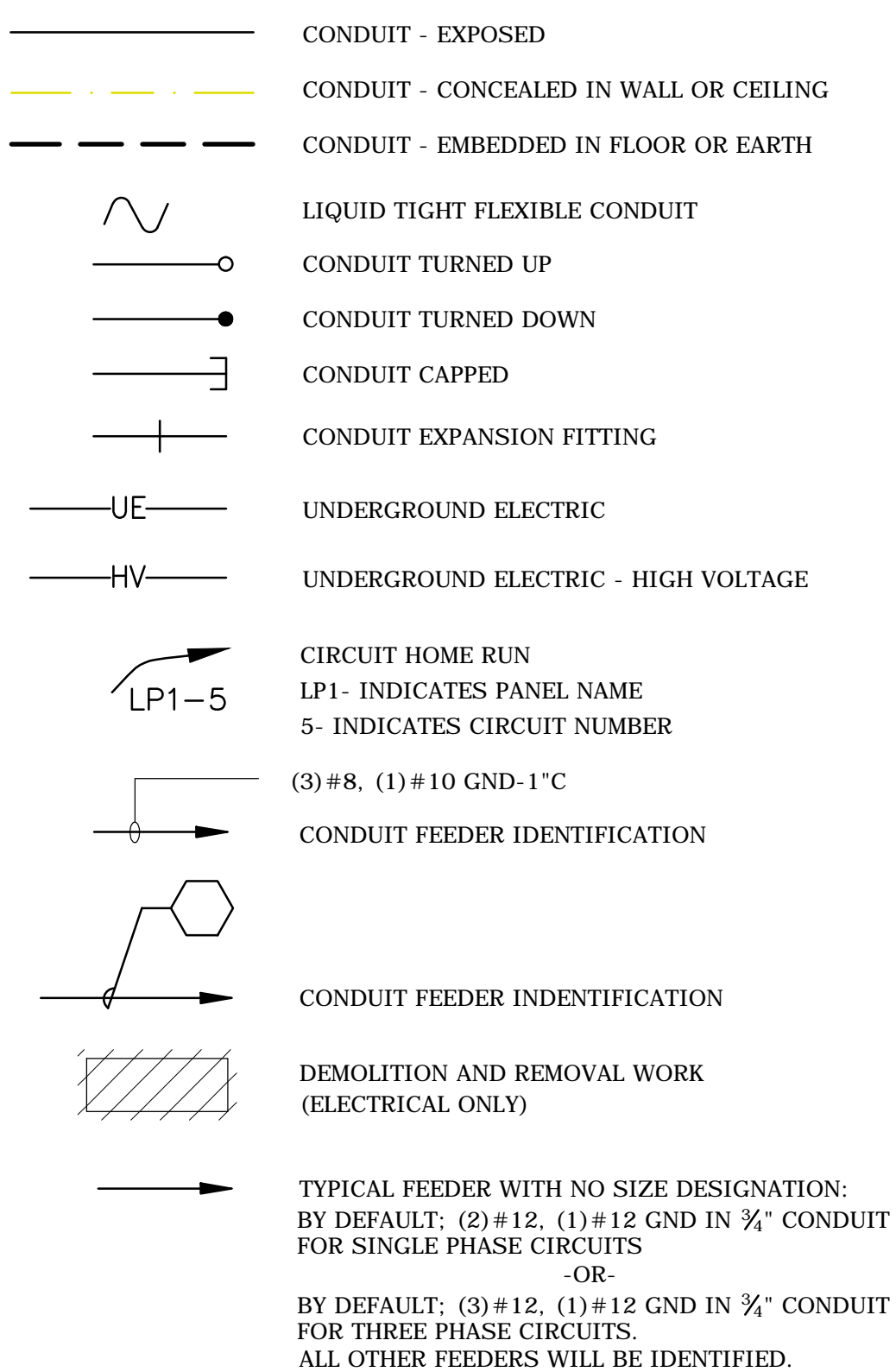
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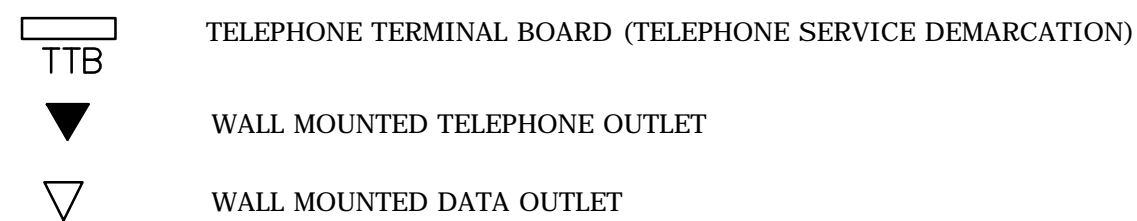
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DESIGNED	TAP
APPROVED	SH

SCALE	NONE
JOB No.	45761.204
DATE	JUNE 2012

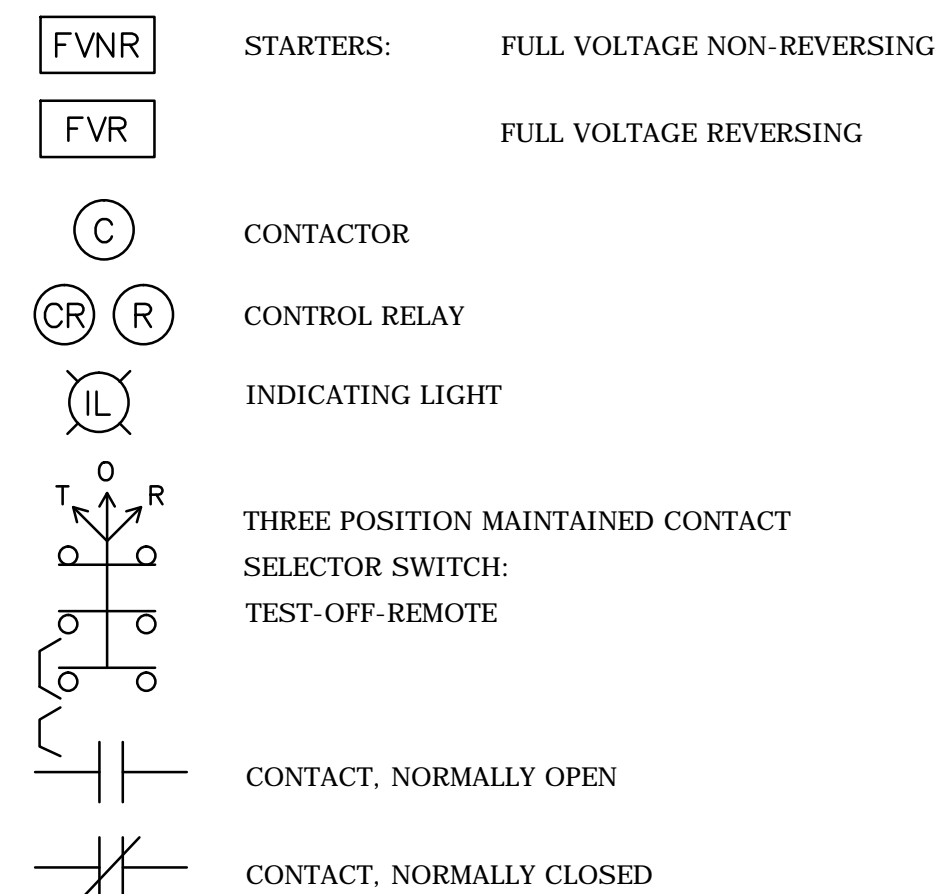
CONDUIT FEEDERS & BRANCH CIRCUITS



BUILDING COMMUNICATIONS



WIRING DIAGRAM SYMBOLS



Gannett Fleming

HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

DISCONNECT SWITCH SCHEDULE








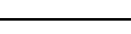
EQUIPMENT TAG	RATINGS			PROTECTION			NEMA ENCLOSURE	REMARKS
	AMPS	VOLTS AC	POLES	NON FUSIBLE	FUSIBLE	FUSE SIZE		
DS-1X	400	600	3	X			4X	HEAVY DUTY, STAINLESS STEEL
DS-2X	30	600	3	X			4X	HEAVY DUTY, STAINLESS STEEL
DS-2	30	600	3	X			12	HEAVY DUTY, STAINLESS STEEL
DS-3X	60	600	3	X			4X	HEAVY DUTY, STAINLESS STEEL
DS-4X	100	600	3	X			4X	HEAVY DUTY, STAINLESS STEEL
DS-5	30	600	3	X			7	HEAVY DUTY, STAINLESS STEEL

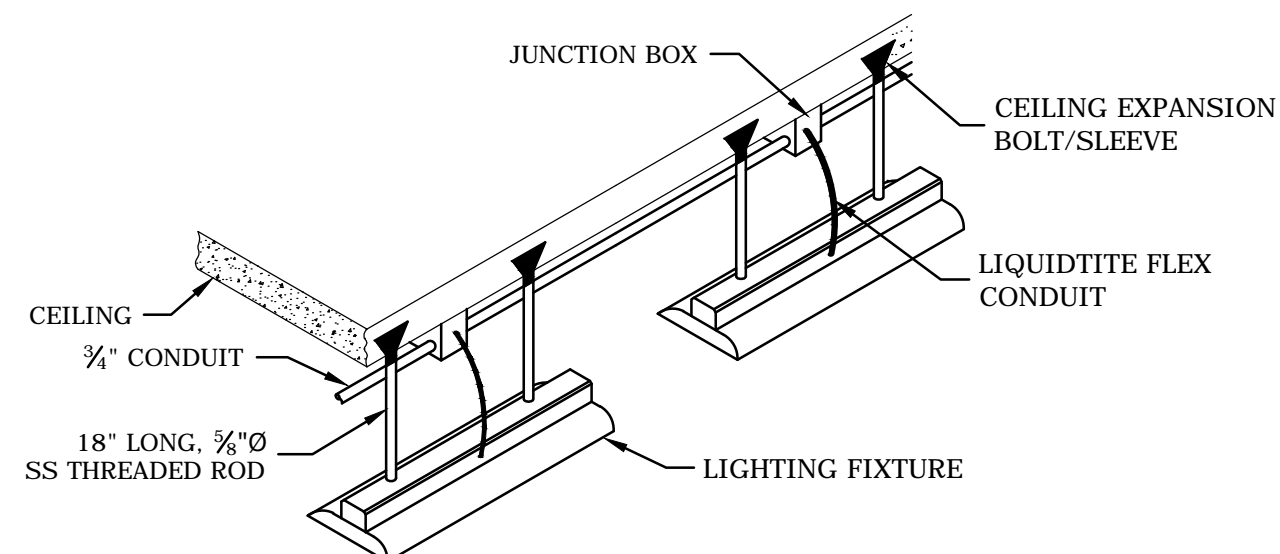
NOTES:

1. LOCATE DISCONNECT SWITCHES AS PER NEC.

LIGHTING

LIGHTING FIXTURE SCHEDULE

MARK	SYMBOL	MANUFACTURER	VOLTS	LAMPS		MOUNTING	DESCRIPTION	REMARKS
				No.	TYPE			
A		HOLOPHANE, PRISMATITE 7200412JDRP1SA	120	2	32W FLOUR	PENDANT	INTERIOR	1'x4' WET LOCATION. SEE DETAIL BELOW a-INDICATES SWITCH CONTROL ZONE 1-INDICATES CIRCUIT NUMBER
B		LITHONIA TWH TWH1505S-120-LPI	120	1	150W HPS	WALL	BUILDING EXTERIOR	WET LOCATION W/LOW TEMP BALLAST & WIRE GUARD a-INDICATES SWITCH CONTROL ZONE 1-INDICATES CIRCUIT NUMBER
C		HOLOPHANE, MONGOOSE G100HP12SF- HG	120	1	100W HPS	POLE	SITE LIGHTING	a-INDICATES SWITCH CONTROL ZONE
EM-1		LITHONIA, IND12 IND12100WH1212SDRTAVTD	120	2	12W	WALL	EMERGENCY LIGHT	PROVIDE WITH BATTERY PACK. POWERED FROM UNSWITCHED LEG OF ASSOCIATED ROOM LIGHTING CIRCUIT
EM-2		LITHONIA, ELA IND ELAWTINDH1212	120	2	12W	WALL	EMERGENCY REMOTE HEAD	
EM-3		LITHONIA, ELA NX ELAWTNXH1212	120	2	12W	WALL	EMERGENCY REMOTE HEAD	WET LOCATION
EM-4		LIGHTALARMS GENESIS SERIES 82GXEW RWDLN	120			WALL	EXIT SIGN	PROVIDE WITH BATTERIES. DAMP LOCATION. POWERED FROM UNSWITCHED LEG OF ASSOCIATED ROOM LIGHTING CIRCUIT
EM-5		LIGHTALARMS GENESIS SERIES 82GXEW RWDLN	120			SURFACE	EXIT SIGN	PROVIDE WITH BATTERIES. DAMP LOCATION. POWERED FROM UNSWITCHED LEG OF ASSOCIATED ROOM LIGHTING CIRCUIT



TYPICAL TYPE 'A' FLUORESCENT FIXTURE
PENDANT MOUNTING DETAIL

PROJECT

SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE

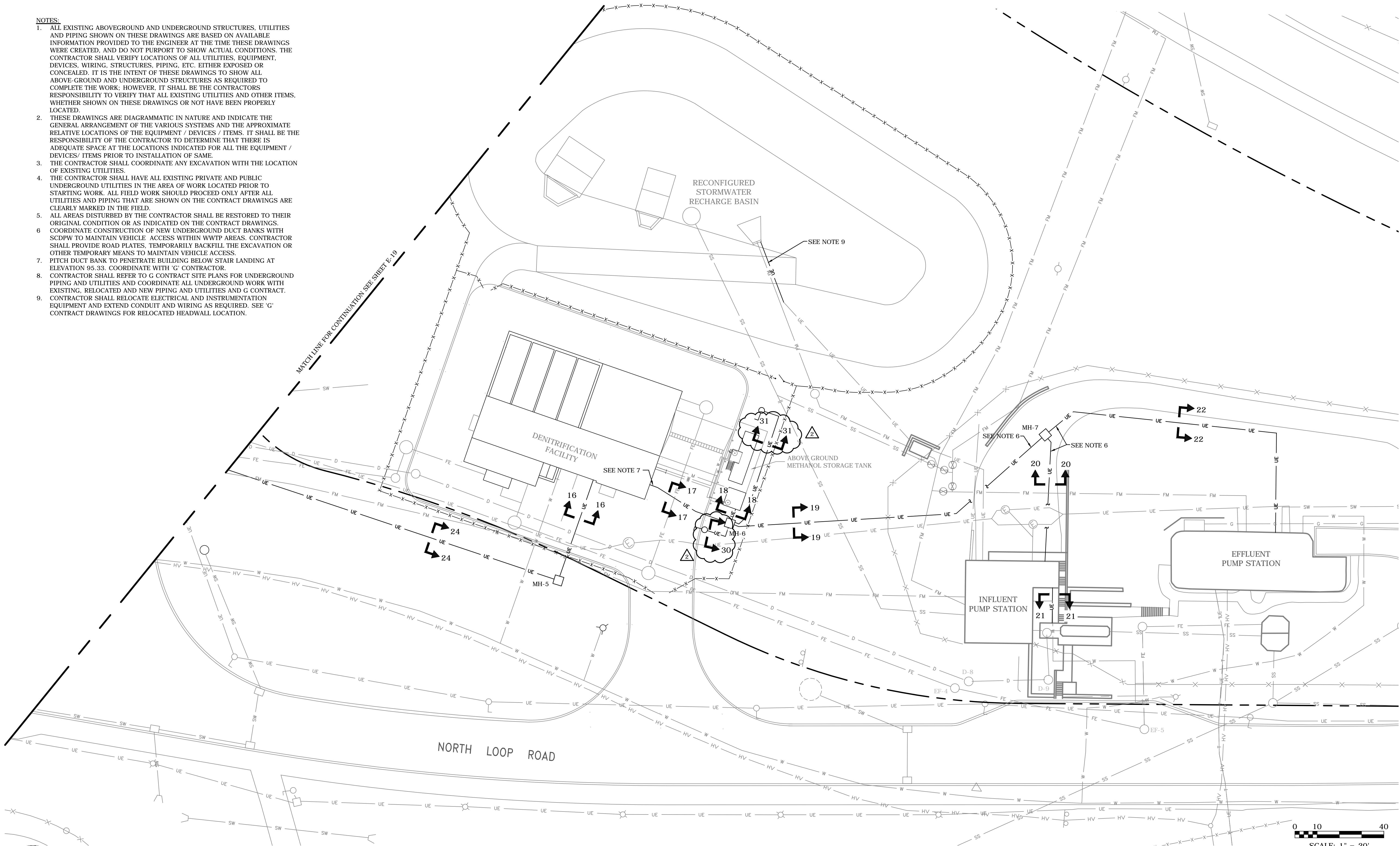
ELECTRICAL SYMBOLS

SHEET No.

E-03

NOTES:

1. ALL EXISTING ABOVEGROUND AND UNDERGROUND STRUCTURES, UTILITIES AND PIPING SHOWN ON THESE DRAWINGS ARE BASED ON AVAILABLE INFORMATION PROVIDED TO THE ENGINEER AT THE TIME THESE DRAWINGS WERE CREATED, AND DO NOT PURPORT TO SHOW ACTUAL CONDITIONS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UTILITIES, EQUIPMENT, DEVICES, WIRING, STRUCTURES, PIPING, ETC. EITHER EXPOSED OR CONCEALED. IT IS THE INTENT OF THESE DRAWINGS TO SHOW ALL ABOVE-GROUND AND UNDERGROUND STRUCTURES AS REQUIRED TO COMPLETE THE WORK; HOWEVER, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL EXISTING UTILITIES AND OTHER ITEMS, WHETHER SHOWN ON THESE DRAWINGS OR NOT HAVE BEEN PROPERLY LOCATED.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL ARRANGEMENT OF THE VARIOUS SYSTEMS AND THE APPROXIMATE RELATIVE LOCATIONS OF THE EQUIPMENT / DEVICES / ITEMS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THAT THERE IS ADEQUATE SPACE AT THE LOCATIONS INDICATED FOR ALL THE EQUIPMENT / DEVICES/ ITEMS PRIOR TO INSTALLATION OF SAME.
3. THE CONTRACTOR SHALL COORDINATE ANY EXCAVATION WITH THE LOCATION OF EXISTING UTILITIES.
4. THE CONTRACTOR SHALL HAVE ALL EXISTING PRIVATE AND PUBLIC UNDERGROUND UTILITIES IN THE AREA OF WORK LOCATED PRIOR TO STARTING WORK. ALL FIELD WORK SHOULD PROCEED ONLY AFTER ALL UTILITIES AND PIPING THAT ARE SHOWN ON THE CONTRACT DRAWINGS ARE CLEARLY MARKED IN THE FIELD.
5. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE CONTRACT DRAWINGS.
6. COORDINATE CONSTRUCTION OF NEW UNDERGROUND DUCT BANKS WITH SCDPW TO MAINTAIN VEHICLE ACCESS WITHIN WWTP AREAS. CONTRACTOR SHALL PROVIDE ROAD PLATES, TEMPORARILY BACKFILL THE EXCAVATION OR OTHER TEMPORARY MEANS TO MAINTAIN VEHICLE ACCESS.
7. PITCH DUCT BANK TO PENETRATE BUILDING BELOW STAIR LANDING AT ELEVATION 95.33. COORDINATE WITH 'G' CONTRACTOR.
8. CONTRACTOR SHALL REFER TO G CONTRACT SITE PLANS FOR UNDERGROUND PIPING AND UTILITIES AND COORDINATE ALL UNDERGROUND WORK WITH EXISTING, RELOCATED AND NEW PIPING AND UTILITIES AND G CONTRACT.
9. CONTRACTOR SHALL RELOCATE ELECTRICAL AND INSTRUMENTATION EQUIPMENT AND EXTEND CONDUIT AND WIRING AS REQUIRED. SEE 'G' CONTRACT DRAWINGS FOR RELOCATED HEADWALL LOCATION.



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DESIGNED	SCALE
LK	1"=20'
APPROVED	DATE
SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
**SITE POWER PLAN
SHEET 2**

SHEET No.

E-20

08/07/12 4:36pm FILE= K:\PROJECTS\45000\45761\Design\WMP Upgrade\ELECTRICAL\E-21 Duct Bank Schedule.dwg by MOHERTY XREFs=WMP Title.

SECTION	CONDUIT ID	DUCT BANK FROM	TO	DESTINATION	DESCRIPTION	CONDUIT SIZE (INCH)	NOTES
1	1A	MAIN SWITCHBOARD CB EP-1	MH-11	NEW 450KW GENERATOR	4 #350KCMIL + #1/0 GND	4	
1	1B	MAIN SWITCHBOARD CB EP-1	MH-11	NEW 450KW GENERATOR	4 #350KCMIL + #1/0 GND	4	
1	1C	MAIN SWITCHBOARD CB EP-1	MH-11	NEW 450KW GENERATOR	4 #350KCMIL + #1/0 GND	4	
1	1D	NEW 30KVA TRANSFORMER	MH-11	GENERATOR POWER PANEL	4 #3/0 + #6 GND	2	
1	1E	FACP (SERVICE BLDG)	MH-11	HEAT DETECTORS IN GEN ENCLOSURE	2 2/C #16 TSP	2	1
1	1F	REMOTE GEN ANNUNCIATOR PNL No. 1	MH-11	GENERATOR CONTROL PANEL	1 FIBER DEN 9729	1	
1	1G	REMOTE GEN ANNUNCIATOR PNL No.1 AND No.2	MH-11	GENERATOR CONTROL PANEL	16 #12 (STRANDED) + #12 GND	2	
1	1H	SERVICE BUILDING	MH-11	NEW 450KW GENERATOR	PULL WIRE	4	
2	2A	MH-10	FACP (SERVICE BLDG)	FACP (SERVICE BLDG)	2 2/C #16 TSP	2	1
2	2B	MH-10	FOTC-AB	FOTC-AB	FIBER OPTIC CABLE	2	2
2	2C	SERVICE BUILDING	MH-10	SCREEN BUILDING	PULL WIRE	2	
2	2D	SERVICE BUILDING	MH-10	SCREEN BUILDING	PULL WIRE	2	
3	3A	MCC-4 STARTER FOR THICKENER MECH	XSH-901, XSHH-901, HS-901	XSH-901, XSHH-901, HS-901	6 #14 + #12 GND	1	
3	3B	PCP-SB	SSL-901	SSL-901	2 #14 + #12 GND	1	
3	3C	PCP-SB	SSL-901	SSL-901	2 #14 + #12 GND	1	
3	3D	SCREEN BUILDING	THICKENER	THICKENER	PULL WIRE	2	
4	4A	LOAD SHEDDING PANEL	MCC-4	MCC-4	1 2/C #16 TSP	1	
4	4B	LP-4	SHED POWER PANEL	SHED POWER PANEL	3 #1 + #8 GND	1-1/2	
4	4C	LP-4	SHED POWER PANEL	SHED POWER PANEL	3 #1 + #8 GND	1-1/2	
4	4D	SCREEN BUILDING	MH-10	MH-10	PULL WIRE	2	
4	4E	FACP (SCREEN BUILDING)	MH-10	FACP (SERVICE BUILDING)	2 2/C #16 TSP	2	1
4	4F	PCP-SB	MH-10	FOTC-AB	FIBER OPTIC CABLE	2	2
4	4G	MH-10	SCREEN BUILDING	SCREEN BUILDING	PULL WIRE	2	
4	4H	MH-10	SCREEN BUILDING	SCREEN BUILDING	PULL WIRE	2	
5	5A	LOAD SHEDDING PANEL	MCC-4	MCC-4	1 2/C #16 TSP	1	
6	6A	VCP-ODS (SLUDGE PUMP STATION)	MH-1	SC-304, SC-306	24 #14 + #12 GND	2	
6	6B	VCP-ODS (SLUDGE PUMP STATION)	MH-1	SC-304, SC-306	4 2/C #16 TSP	1	
6	6C	SLUDGE PUMP STATION	MH-1	MH-1	PULL WIRE	2	
6	6D	SLUDGE PUMP STATION	MH-1	MH-1	PULL WIRE	2	
7	7A	MH-1	SC-304, SC-306	SC-304, SC-306	24 #14 + #12 GND	2	
7	7B	MH-1	SC-304, SC-306	SC-304, SC-306	4 2/C #16 TSP	1	
7	7C	MH-1	OXIDATION DITCH NORTH PLATFORM	OXIDATION DITCH NORTH PLATFORM	PULL WIRE	2	
7	7D	MH-1	OXIDATION DITCH NORTH PLATFORM	OXIDATION DITCH NORTH PLATFORM	PULL WIRE	2	
8	8A	MCC-5 (SLUDGE PUMP STATION)	LV-320	LV-320	3 #12 + #12 GND	1	
8	8B	VCP-ODS (SLUDGE PUMP STATION)	SC-301	SC-301	12 #14 + #12 GND	1	
8	8C	VCP-ODS (SLUDGE PUMP STATION)	SC-301	SC-301	2 2/C #16 TSP	1	
8	8D	VCP-ODS (SLUDGE PUMP STATION)	LT-311	LT-311	1 2/C #16 TSP	1	
8	8E	SLUDGE PUMP STATION	OXIDATION DITCH WEST PLATFORM	OXIDATION DITCH WEST PLATFORM	PULL WIRE	2	
8	8F	SLUDGE PUMP STATION	OXIDATION DITCH WEST PLATFORM	OXIDATION DITCH WEST PLATFORM	PULL WIRE	2	
9	9A	VCP-ODS (SLUDGE PUMP STATION)	MH-2	SC-302, SC-305	24 #14 + #12 GND	2	
9	9B	VCP-ODS (SLUDGE PUMP STATION)	MH-2	SC-302, SC-305	4 2/C #16 TSP	1	
9	9C	VCP-ODS (SLUDGE PUMP STATION)	MH-2	SC-303	12 #14 + #12 GND	1	
9	9D	VCP-ODS (SLUDGE PUMP STATION)	MH-2	SC-303	2 2/C #16 TSP	1	
9	9E	VCP-ODS (SLUDGE PUMP STATION)	MH-2	AIT-311, AIT-312A, AIT-312B, AIT-313	4 2/C #16 TSP	1	
9	9F	VCP-ODS (SLUDGE PUMP STATION)	MH-2	AIT-311, AIT-312A, AIT-312B, AIT-313	8 #12 + #12 GND	1	
9	9G	SLUDGE PUMP STATION	MH-2	MH-2	PULL WIRE	2	
9	9H	SLUDGE PUMP STATION	MH-2	MH-2	PULL WIRE	2	
10	10A	MH-2	SC-302, SC-305	SC-302, SC-305	24 #14 + #12 GND	2	
10	10B	MH-2	SC-302, SC-305	SC-302, SC-305	4 2/C #16 TSP	1	
10	10C	MH-2	AIT-311, AIT-312A, AIT-312B, AIT-313	AIT-311, AIT-312A, AIT-312B, AIT-313	4 2/C #16 TSP	1	
10	10D	MH-2	AIT-311	AIT-311	2 #12 + #12 GND	1	
10	10E	MH-2	AIT-312A	AIT-312A	2 #12 + #12 GND	1	
10	10F	MH-2	AIT-312B	AIT-312B	2 #12 + #12 GND	1	
10	10G	MH-2	AIT-313	AIT-313	2 #12 + #12 GND	1	
10	10H	MH-2	OXIDATION DITCH SOUTH PLATFORM	OXIDATION DITCH SOUTH PLATFORM	PULL WIRE	2	
10	10I	MH-2	OXIDATION DITCH SOUTH PLATFORM	OXIDATION DITCH SOUTH PLATFORM	PULL WIRE	2	
11	11A	MH-2	MH-3	SC-303	12 #14 + #12 GND	1	
11	11B	MH-2	MH-3	SC-303	2 2/C #16 TSP	1	
11	11C	MH-2	MH-3	MH-3	PULL WIRE	2	
11	11D	MH-2	MH-3	MH-3	PULL WIRE	2	
12	12A	MH-3	SC-303	SC-303	12 #14 + #12 GND	1	
12	12B	MH-3	SC-303	SC-303	2 2/C #16 TSP	1	
12	12C	MH-3	OXIDATION DITCH EAST PLATFORM	OXIDATION DITCH EAST PLATFORM	PULL WIRE	2	
12	12D	MH-3	OXIDATION DITCH EAST PLATFORM	OXIDATION DITCH EAST PLATFORM	PULL WIRE	2	
NOTES: 1. CABLES SHALL BE RATED FOR USE IN FA SYSTEMS 2. 12 STRAND 62.5 MICRON MULTIMODE FIBER OPTIC CABLE							

SECTION	CONDUIT ID	DUCT BANK FROM	TO	DESTINATION	DESCRIPTION	CONDUIT SIZE (INCH)	NOTES
13	13A	FOTC-AB	MH-4	PCP-SPS	FIBER OPTIC CABLE	2	2
13	13B	FACP (SERVICE BUILDING)	MH-4	FACP (SLUDGE PUMP STATION)	2 2/C #16 TSP	2	1
13	13C	SERVICE BUILDING	MH-4	MH-4	PULL WIRE	2	
13	13D	SERVICE BUILDING	MH-4	MH-4	PULL WIRE	2	
14	14A	MH-4	PCP-SPS	PCP-SPS	FIBER OPTIC CABLE	2	2
14	14B	MH-4	FACP (SLUDGE PUMP STATION)	FACP (SLUDGE PUMP STATION)	2 2/C #16 TSP	2	1
14	14C	PCP-SPS	MH-4	PCP-DFB	FIBER OPTIC CABLE	2	2
14	14D	MH-4	SLUDGE PUMP STATION	SLUDGE PUMP STATION	PULL WIRE	2	
15	15A	MH-4	MH-8	PCP-DFB	FIBER OPTIC CABLE	2	2
15	15B	MH-4	MH-8	MH-8	PULL WIRE	2	
15	15C	MH-4	MH-8	DENITRIFICATION FACILITY	PULL WIRE	2	
15	15D	MH-4	MH-8	DENITRIFICATION FACILITY	PULL WIRE	2	
16	16A	MH-5	PCP-DFB	PCP-DFB	FIBER OPTIC CABLE	2	2
16	16B	MH-5	DENITRIFICATION FACILITY	DENITRIFICATION FACILITY	PULL WIRE	2	
16	16C	MH-5	DENITRIFICATION FACILITY	DENITRIFICATION FACILITY	PULL WIRE	2	
16	16D	MH-5	DENITRIFICATION FACILITY	DENITRIFICATION FACILITY	PULL WIRE	2	
17	17A	DNLP-1	MH-6	DNLP-2	3 #2 + #8 GND	1-1/2	
17	17B	DNLP-1	MH-6	METHANOL SITE LIGHTING	2 #12 + #12 GND	1	
17	17C	CP-690	MH-6	METHANOL FEED PUMPS 1 AND 2	6 #10 + #12 GND	1	
17	17D	PCP-DFB	MH-6	FS-698A, FS-698B	4 #14 + #12 GND	1	
17	17E	LY690B	MH-6	LAH-690A	MANUFACTURERS CABLE	1	
17	17F	LIC-690	MH-6	LI-690A	1 RS-485 CABLE	1	
17	17G	LIC-690	MH-6	LE-690, LE-690A, LE-690B, LE-690C	MANUFACTURERS CABLES	1	
17	17H	DNLP-1	MH-6	SECURITY EQPT AT SITE LIGHTING POLE	PULL WIRE	2	
17	17I	DNLP-1	MH-6	SECURITY EQPT AT SITE LIGHTING POLE	PULL WIRE	2	
17	17J	DENITRIFICATION FACILITY	MH-6	METHANOL AREA	PULL WIRE	2	
17	17K	DENITRIFICATION FACILITY	MH-6	METHANOL AREA	PULL WIRE	2	
17	17L	DENITRIFICATION FACILITY	MH-6	METHANOL AREA	PULL WIRE	2	
17	17M	MH-6	MCCDN	MCCDN	4 #350KCMIL + #1/0 GND	4	
17	17N	MH-6	MCCDN	MCCDN	4 #350KCMIL + #1/0 GND	4	
17	17O	MH-6	MCCDN	MCCDN	4 #350KCMIL + #1/0 GND	4	
17	17P	PCP-DFB	MH-6	PCP-IPS	FIBER OPTIC CABLE	2	2
17	17Q	FACP (DENITE FACILITY)	MH-6	EXISTING FACP (EFFLUENT PUMP STA)	2 2/C #16 TSP	2	1
17	17R	DENITRIFICATION FACILITY	MH-6	MH-6	PULL WIRE	2	
17	17S	DENITRIFICATION FACILITY	MH-6	MH-6	PULL WIRE	2	
17	17T	DENITRIFICATION FACILITY	MH-6	MH-6	PULL WIRE	2	
18	18A	MH-6	DNLP-2	DNLP-2	3 #2 + #8 GND	1-1/2	
18	18B	MH-6	METHANOL SITE LIGHTING	METHANOL SITE LIGHTING	2 #12 + #12 GND	1	
18	18C	MH-6	METHANOL FEED PUMPS 1 AND 2	METHANOL FEED PUMPS 1 AND 2	6 #10 + #12 GND	1	
18	18D	MH-6	FS-698A, FS-698B	FS-698A, FS-698B	4 #14 + #12 GND	1	
18	18E	MH-6	LAH-690A	LAH-690A	MANUFACTURERS CABLE	1	
18	18F	MH-6	LI-690A	LI-690A	1 RS-485 CABLE	1	
18	18G	MH-6	LE-690, LE-690A, LE-690B, LE-690C	LE-690, LE-690A, LE-690B, LE-690C	MANUFACTURERS CABLES	1	
18	18H	MH-6	SECURITY EQPT AT SITE LIGHTING POLE	SECURITY EQPT AT SITE LIGHTING POLE	PULL WIRE	2	
18	18I	2 2/C #16 TSP	MH-6	SECURITY EQPT AT SITE LIGHTING POLE	PULL WIRE	2	
18	18J	MH-6	METHANOL AREA	METHANOL AREA	PULL WIRE	2	
18	18K	MH-6	METHANOL AREA	METHANOL AREA	PULL WIRE	2	
18	18L	MH-6	METHANOL AREA	METHANOL AREA	PULL WIRE	2	
19	19A	MH-7	MH-6	MCCDN	4 #350KCMIL + #1/0 GND	4	
19	19B	MH-7	MH-6	MCCDN	4 #350KCMIL + #1/0 GND	4	
19	19C	MH-7	MH-6	MCCDN	4 #350KCMIL + #1/0 GND	4	
19	19D	MH-6	MH-7	PCP-IPS	FIBER OPTIC CABLE	2	2
19	19E	MH-6	MH-7	MH-7	PULL WIRE	2	
19	19F	MH-6	MH-7	EXISTING FACP (EFFLUENT PUMP STA)	2 2/C #16 TSP	2	1
19	19G	MH-6	MH-7	MH-7	PULL WIRE	2	
19	19H	MH-6	MH-7	MH-7	PULL WIRE	2	
20	20A	PCP-IPS	MH-7	PCP-EPS	FIBER OPTIC CABLE	2	2
20	20B	MH-7	PCP-IPS	PCP-IPS	FIBER OPTIC CABLE	2	2
20	20C	FACP (INFLUENT PUMP STATION)	MH-7	EXISTING FACP (EFFLUENT PUMP STA)	2 2/C #16 TSP	2	1
20	20D	INFLUENT PUMP STATION	MH-7	MH-7	PULL WIRE	2	
21	21A	PCP-IPS	WEATHERPROOF JUNCTION BOX	CS-110, CP-111, CP-112	2/C #16 TSP	1	
21	21B	PCP-IPS	WEATHERPROOF JUNCTION BOX	CS-110, CP-111, CP-112	26 #14 + #12 GND	2	
21	21C	PCP-IPS	WEATHERPROOF JUNCTION BOX	WEATHERPROOF JUNCTION BOX	PULL WIRE	1	
21	21D	PCP-IPS	WEATHERPROOF JUNCTION BOX	WEATHERPROOF JUNCTION BOX	PULL WIRE	2	

- NOTES:
1. CABLES SHALL BE RATED FOR USE IN FA SYSTEMS
2. 12 STRAND 62.5 MICRON MULTIMODE FIBER OPTIC CABLE



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No.	DESCRIPTION	DATE	BY	APPROVED	
	REVISIONS			SH	



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HARRISBURG, PENNSYLVANIA

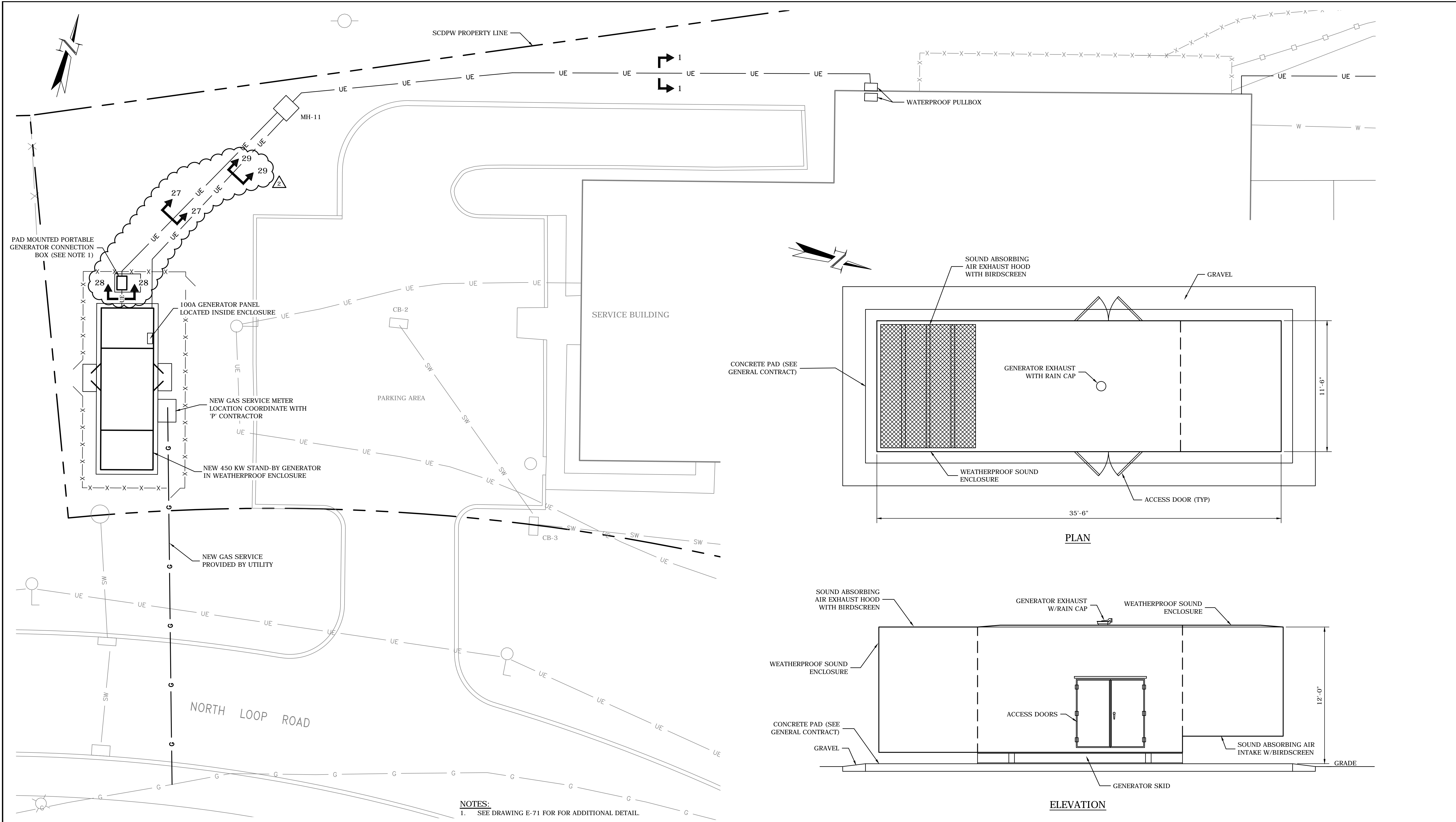
WOODBURY, NEW YORK

PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
**UNDERGROUND DUCT BANK
SCHEDULE**

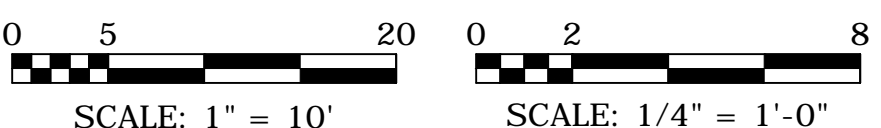
SHEET No.

E-21



LOCATION PLAN
SCALE: 1"=10'

GENERATOR ENCLOSURE DETAIL
SCALE: 1/4"=1'-0"



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2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH
REVISIONS			

DRAWN	SCALE
MJD	AS NOTED
DESIGNED	JOB No.
TAP	45761.204
APPROVED	DATE
SH	JUNE 2012

HARRISBURG, PENNSYLVANIA
WOODBURY, NEW YORK

PROJECT

**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

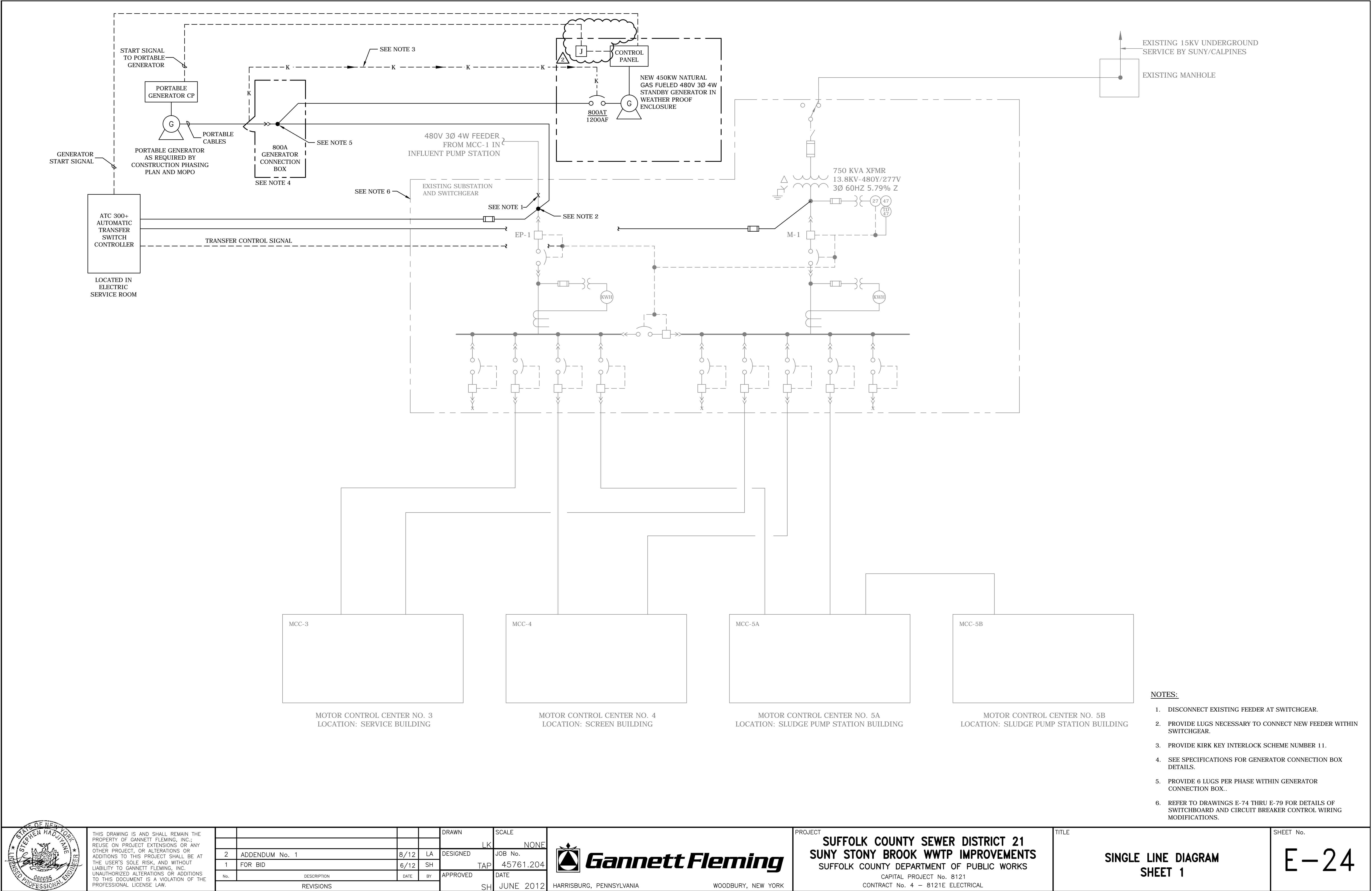
TITLE

**STAND-BY GENERATOR
LOCATION PLAN**

SHEET No.

E-23

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2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH

REVISIONS
1

DRAWN	SCALE
LK	NONE
DESIGNED	JOB No.
TAP	45761.204
APPROVED	DATE
SH	JUNE 2012



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HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

PROJECT
SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
SINGLE LINE DIAGRAM
SHEET 1

SHEET No.
E-24



SEE SHEET E-23
FOR CONTINUATION

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DRIVEWAY

GRAVEL

OFFICE 1

CONFERENCE ROOM

LUNCH ROOM

GENERAL OFFICE

MENS BATHROOM

JANITORS CLOSET

FACP

VESTIBULE

EXISTING LP3-26

LOBBY

LABORATORY STORAGE

SERVER CLOSET

WOMENS BATHROOM

OFFICE 2

LABORATORY 1

LABORATORY 2

OFFICE 3

CONCRETE WALK

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SEE NOTE 2 (TYP)

SKYLIGHT ABOVE (TYP)

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MAINTENANCE

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FEEDER LEGEND

- 1 4 #6 + #10 GND IN 1" CONDUIT
- 2 4 #3/0 + #6 GND IN 2" CONDUIT
- 3 3 SETS OF 4 #350 KCMIL + #1/0 GND IN 3" CONDUIT
- 4 2 2/C #16 TPS FA RATED CABLES IN 1" CONDUIT
- 5 1 BELDEN 9729 IN 1" CONDUIT
- 6 10 #12 (STRANDED) + #12 GND IN 3/4" CONDUIT

- 7 3 #8 AWG + 1 #8 GND IN 1" CONDUIT
- 8 3 #8 AWG + 1 #8 GND IN 1" CONDUIT
- 9 2 #12 AWG + 1 #12 GND IN 1 1/2" CONDUIT
- 10 4 #12 + 1 #12 GND IN 1" CONDUIT

NOTES:

1. WIRE TO AN EXISTING SPARE 120V, 20A, 1 PHASE CIRCUIT BREAKER IN CLOSEST POWER PANEL.
2. PVC COATED RGS CONDUIT RUN EXPOSED ALONG ROOF FRAMING STEEL AND SUPPORTED PER SPECIFICATION 16070 AND NEC.
3. PVC COATED RGS CONDUIT RUN ABOVE DROP CEILING AND SUPPORTED PER SPECIFICATION 16070 AND NEC.
4. PROVIDE A 30 KVA 480V TO 208Y/120V DRYTYPE TRANSFORMER. ACCESS TO ALL TAPS SHALL BE AVAILABLE FROM FRONT OF ENCLOSURE.
5. FINAL LOCATION TO BE DETERMINED BY OWNER IN FIELD.
6. PROVIDE NEW 60A, 3 POLE CIRCUIT BREAKER IN AVAILABLE SPACE WITHIN MCC-3. PROVIDE ALL NECESSARY ACCESSORIES
7. PENETRATE THROUGH WALL AND PROVIDE CONDUIT SEALS PER CONTRACT SPECIFICATIONS.

ELECTRICAL FLOOR PLAN BRANCH CIRCUIT WIRING NOTICE

BRANCH CIRCUIT WIRING:
UNLESS OTHERWISE INDICATED, EQUIPMENT POWER REQUIREMENTS ARE SHOWN WITHOUT HOME-RUN CIRCUIT INDICATIONS. THE INTENT OF THESE DRAWINGS IS FOR THE CONTRACTOR TO PROVIDE THE NECESSARY BRANCH CIRCUIT WIRING FOR EQUIPMENT SHOWN TO MEET THE DESIGN INTENTS AS SHOWN ON THE DRAWING. GENERALLY, INSTALLATION OF BRANCH CIRCUIT WIRING SHALL BE SURFACE MOUNTED, HOWEVER, UNLESS OTHERWISE INDICATED, INSTALLATION OF THE BRANCH CIRCUITS (SURFACE OR EMBEDDED IN THE FLOOR) SHALL BE AT THE DISCRETION OF THE CONTRACTOR.

CONTRACTOR SHALL REFER TO SYMBOLS, ABBREVIATIONS AND GENERAL NOTES ON E-02 AND E-03 FOR "DEFAULT" FEEDER REQUIREMENTS. SEE FEEDER LEGEND ON THIS PAGE FOR ADDITIONAL FEEDER REQUIREMENTS.



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No.	DESCRIPTION	DATE	BY
2	ADDENDUM No. 1	8/12	LA
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DESIGN	SCALE
MJD	3/16"=1'-0"
APPROVED	DATE
SH	JUNE 2012



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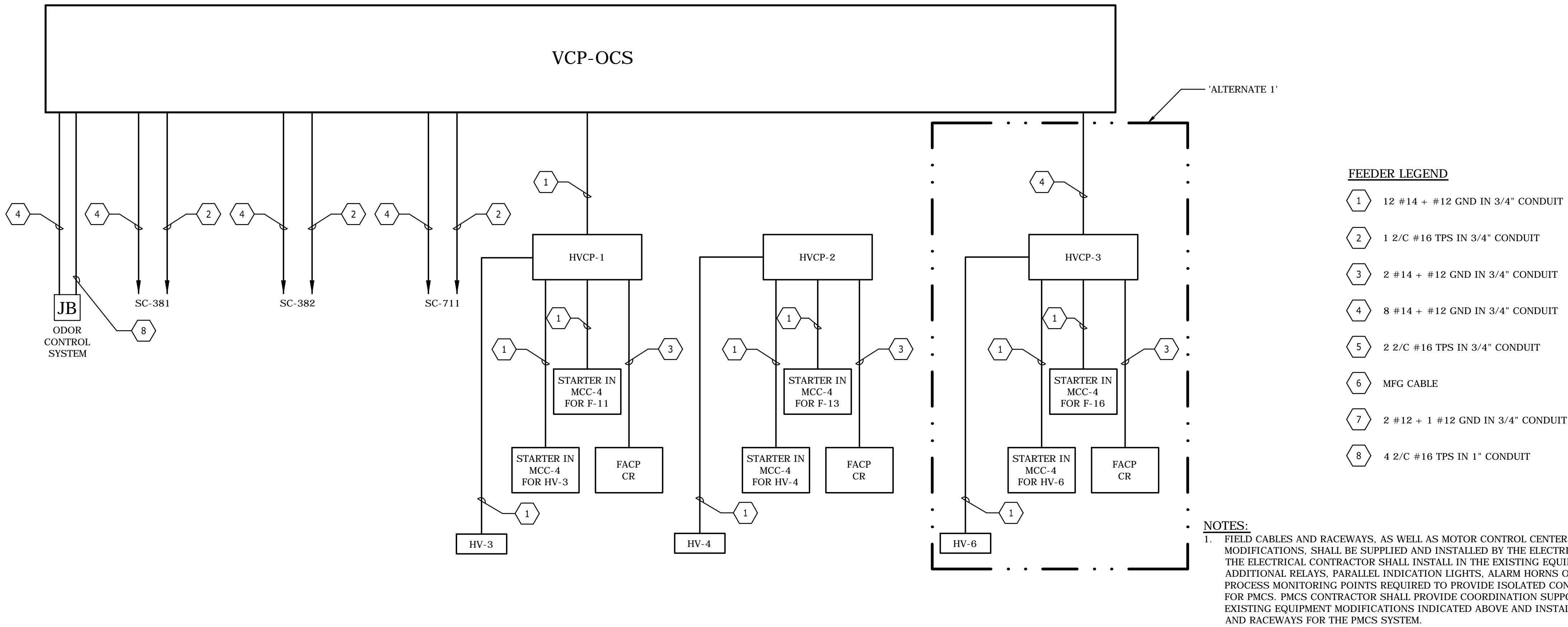
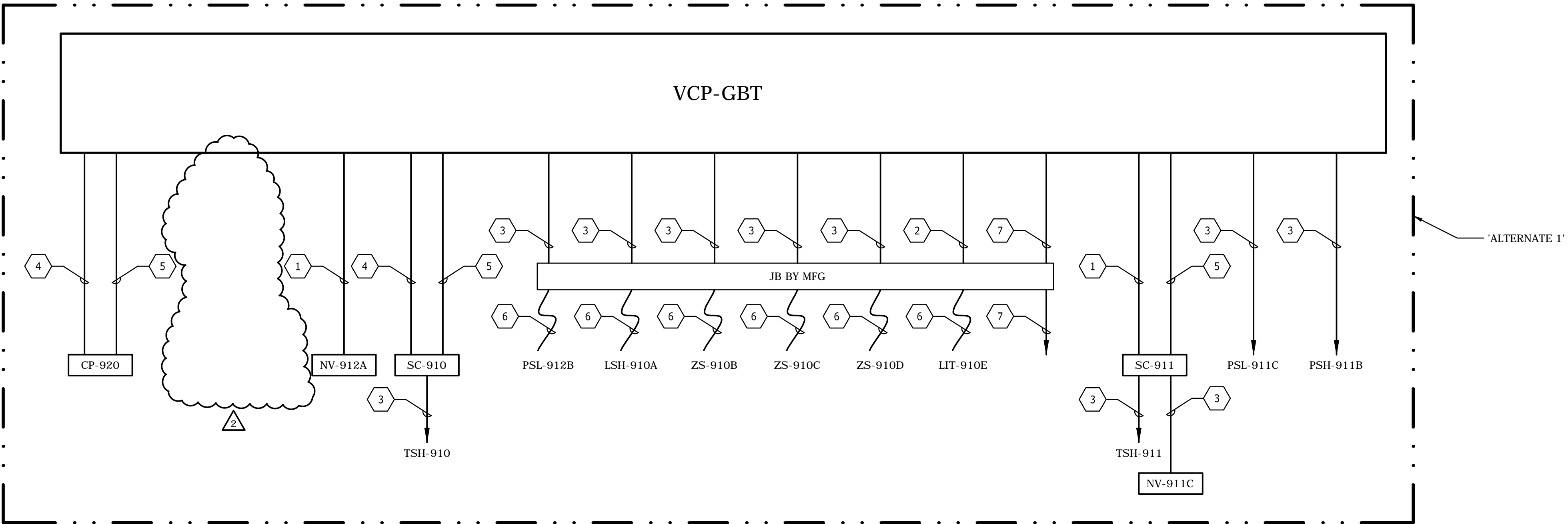
WOODBURY, NEW YORK

PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 1 - 8121G GENERAL CONSTRUCTION

TITLE
**SERVICE BUILDING POWER AND
INSTRUMENTATION PLAN**

SHEET No.
E-31

08/07/12 4:36pm FILE= K:\PROJECTS\45000\45000\45000\Design\WMP Upgrade\ELECTRICAL\41 GBT Bldg Instr Riser.dwg by MOOHERTY XREFs=WWP Title.



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2	ADDENDUM No. 1	8/12	LA		
1	FOR BID	6/12	SH		
No.	DESCRIPTION	DATE	BY		
REVISIONS					

DRAWN	SCALE
MJD	NONE
DESIGNED	JOB No.
TAP	45761.204
APPROVED	DATE
SH	JUNE 2012



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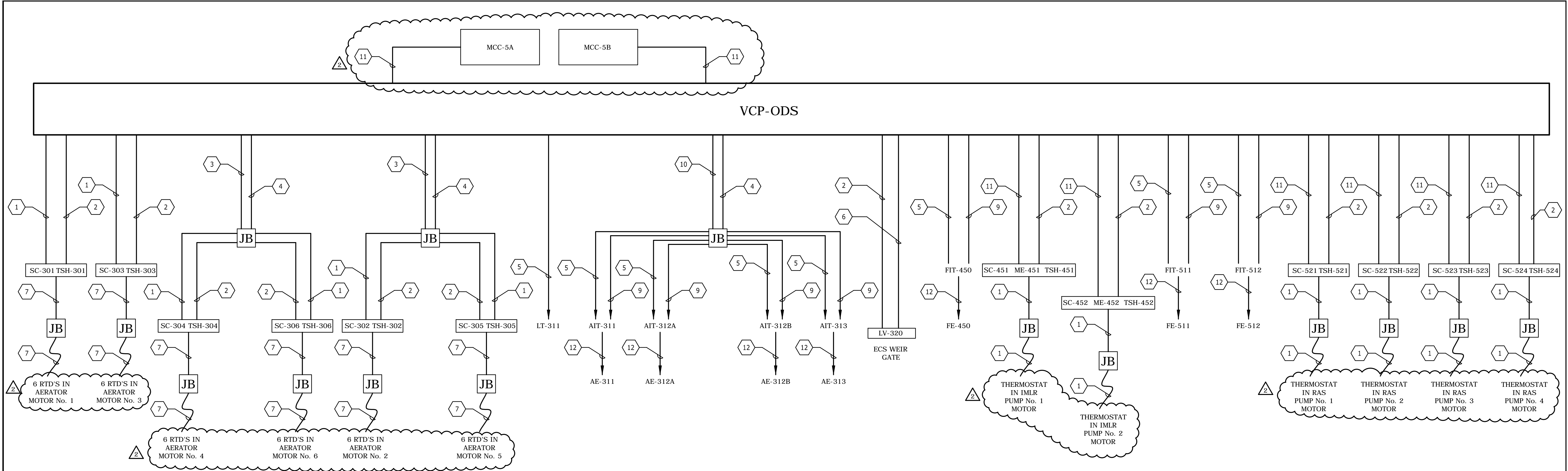
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WOODBURY, NEW YORK

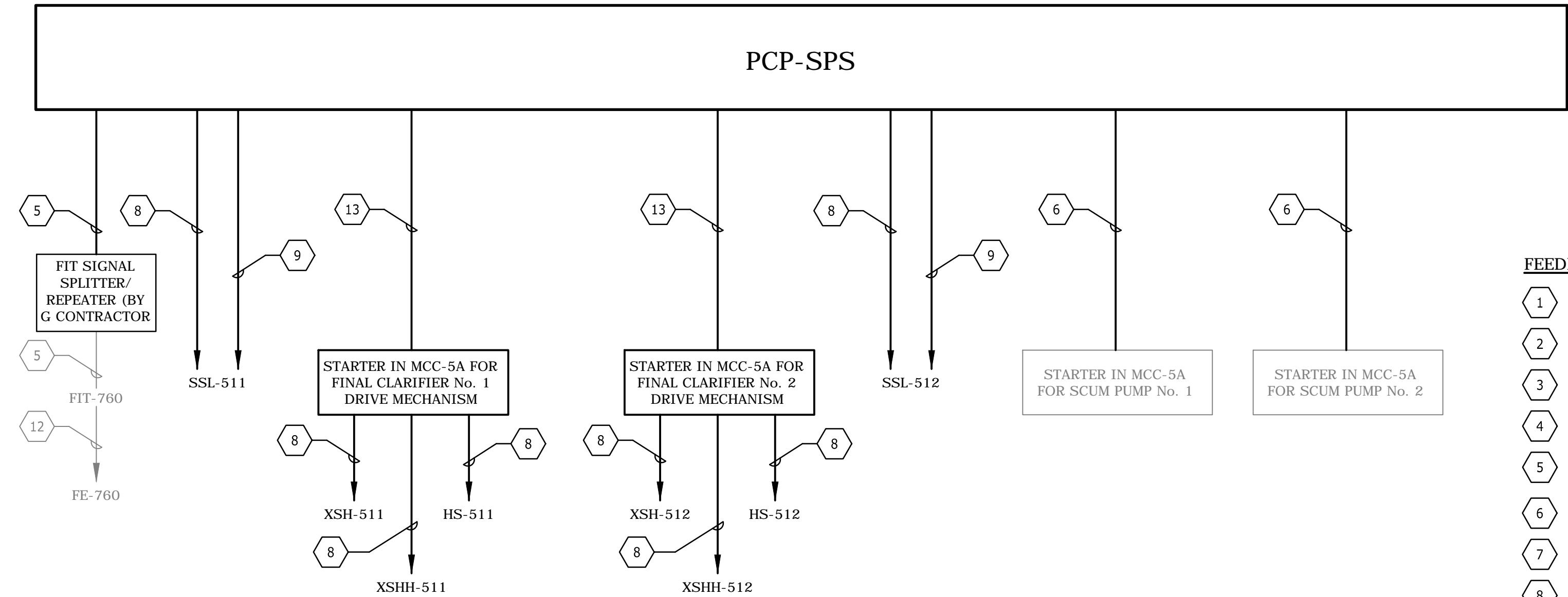
PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
**GBT ROOM AND
ODOR CONTROL SYSTEM
INSTRUMENTATION RISER DIAGRAM**

SHEET No.
E-41



OXIDATION DITCH INSTRUMENTATION RISER DIAGRAM



SLUDGE PUMP STATION
INSTRUMENTATION RISER DIAGRAM

FEEDER LEGEND:

- 1 12#14 + #12 GND IN 3/4" CONDUIT
- 2 2 2/C #16 TSP IN 3/4" CONDUIT
- 3 24#14 + #12 GND IN 1 1/2" CONDUIT
- 4 4 2/C #16 TSP IN 1" CONDUIT
- 5 1 2/C #16 TSP IN 3/4" CONDUIT
- 6 4#14 + #12 GND IN 3/4" CONDUIT
- 7 6 3/C #16 TRIAD IN 1 1/2" CONDUIT
- 8 2#14 + #12 GND IN 3/4" CONDUIT
- 9 2#12 + #12 GND IN 3/4" CONDUIT
- 10 8#12 + #12 GND IN 3/4" CONDUIT
- 11 14#14 + #12 GND IN 1" CONDUIT
- 12 MANUFACTURER CABLE
- 13 6 #14 + #12 GND IN 3/4" CONDUIT

NOTES:

1. FIELD CABLES AND RACEWAYS, AS WELL AS MOTOR CONTROL CENTER STARTER MODIFICATIONS, SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL INSTALL IN THE EXISTING EQUIPMENT ADDITIONAL RELAYS, PARALLEL INDICATION LIGHTS, ALARM HORNS OR ANY OTHER PROCESS MONITORING POINTS REQUIRED TO PROVIDE ISOLATED CONTACTS AS INPUTS FOR PMCS. PMCS CONTRACTOR SHALL PROVIDE COORDINATION SUPPORT FOR THE EXISTING EQUIPMENT MODIFICATIONS INDICATED ABOVE AND INSTALLATION OF CABLE AND RACEWAYS FOR THE PMCS SYSTEM.

08/07/12 4:36pm FILE= K:\PROJECTS\45000\44761\Design\WMP Upgrade\ELECTRICAL\449 Oxi Ditch Instru Riser Diagram by MDOHERTY XREFs=WMP Title.

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	2		ADDENDUM No. 1	8/12	LA	DESIGNED	MJD	JOB No.					NONE		
	1		FOR BID	6/12	SH	TAP	45761.204	DATE							
	No.		DESCRIPTION	DATE	BY	APPROVED	DATE								
REVISIONS												SH	JUNE 2012		

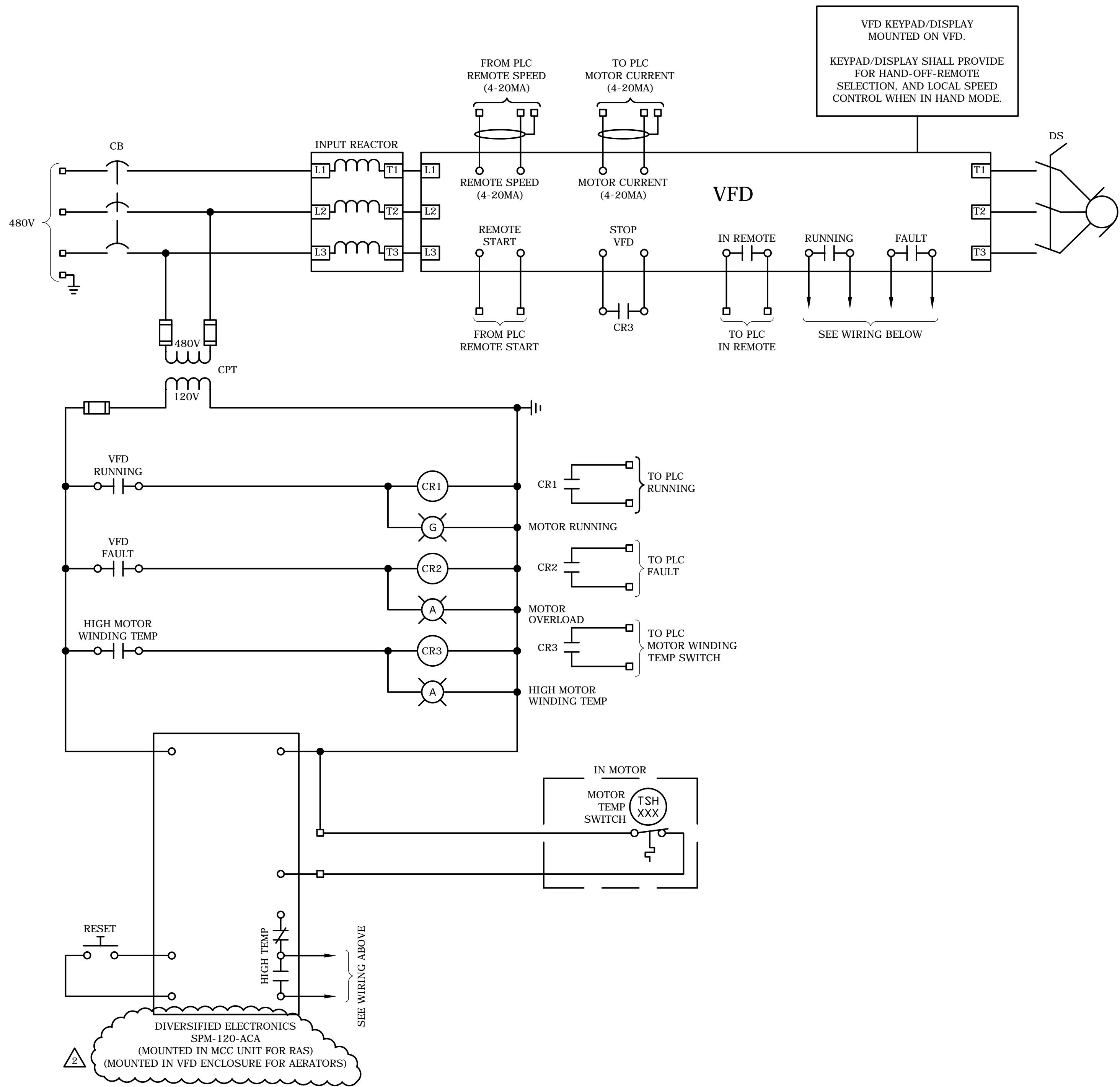
PANEL DESIGNATION			TYPE: NUMBER OF POLES: 42 MAIN BUS RATING: 225A MAIN RATING: 225A			LOCATION: DENITE FACILITY ELECTRICAL ROOM VOLTAGE: 480Y/277V, 3Ø, 4W PANEL MOUNTING: SURFACE PANEL ENCLOSURE: NEMA 12 PANEL MIN AIC RATING: 65 KALC					
DNHP-1											
CKT. NO.	CKT. BKR.	DESCRIPTION	LOAD - KVA			LOAD - KVA			DESCRIPTION	CKT. BKR.	CKT. NO.
			A	B	C	A	B	C			
1			0.6			0.6					2
3	20/3	MOV NV-621A		0.6			0.6		MOV NV-622A	20/3	4
5					0.6			0.6			6
7			0.6			0.6					8
9	20/3	MOV NV-621B		0.6			0.6		MOV NV-622B	20/3	10
11					0.6			0.6			12
13			0.6			0.6					14
15	20/3	MOV NV-631B		0.6			0.6		MOV NV-632B	20/3	16
17					0.6			0.6			18
19			0.6			0.6					20
21	20/3	MOV NV-631A		0.6			0.6		MOV NV-632A	20/3	22
23					0.6			0.6			24
25			0.6			0.6					26
27	20/3	MOV NV-641		0.6			0.6		MOV NV-642	20/3	28
29					0.6			0.6			30
31			0.0			0.0					32
33	20/3	SPARE		0.0			0.0		SPARE	20/3	34
35					0.0			0.0			36
37			0.0			0.0					38
39	20/3	SPARE		0.0			0.0		SPARE	20/3	40
41					0.0			0.0			42
TOTAL			3.0	3.0	3.0	3.0	3.0	3.0	TOTAL		
PANEL CONNECTED LOAD											
A 6.0			CONTINUOUS AMPS 0.0			X			SOLID NEUTRAL BUS		
B 6.0			NON-CONTINUOUS 22.0			X			EQUIPMENT GROUND BUS		
C 6.0			SUM 22.0			X			SPD		
18.0 TOTAL									SERVICE ENTRANCE		

PANEL DESIGNATION			TYPE: NUMBER OF POLES: 42 MAIN BUS RATING: 225A MAIN RATING: 225A			LOCATION: DENITE FACILITY ELECTRICAL ROOM VOLTAGE: 480Y/277V, 3Ø, 4W PANEL MOUNTING: SURFACE PANEL ENCLOSURE: NEMA 12 PANEL MIN AIC RATING: 65 KAIC					
DNHP-3											
CKT. NO.	CKT. BKR.	DESCRIPTION	LOAD - KVA			LOAD - KVA			DESCRIPTION	CKT. BKR.	CKT. NO.
			A	B	C	A	B	C			
1	20/3	SPARE							MOV NV-640	20/3	2
3								4			
5								6			
7	20/3	SPARE				3.3			UH-30 UNIT HEATER	20/3	8
9						3.3		10			
11						3.3		12			
13	20/3	UH-31 UNIT HEATER	3.3			3.3			UH-32 UNIT HEATER	20/3	14
15				3.3		3.3		16			
17					3.3		3.3				18
19	20/3	UH-33 UNIT HEATER	1.1			1.1			UH-34 UNIT HEATER	20/3	20
21				1.1		1.1		22			
23					1.1		1.1				24
25	20/3	SPARE							SPARE	20/3	26
27								28			
29								30			
31	20/3	SPARE	0.0			0.0			SPARE	20/3	32
33				0.0		0.0		34			
35					0.0		0.0				36
37	20/3	SPARE	0.0			0.0			SPARE	20/3	38
39				0.0		0.0		40			
41					0.0		0.0				42
TOTAL			4.4	4.4	4.4	7.8	7.8	7.8	TOTAL		
PANEL CONNECTED LOAD											
A 12.2			CONTINUOUS AMPS 55.0			X			SOLID NEUTRAL BUS		
B 12.2			NON-CONTINUOUS 0.0			X			EQUIPMENT GROUND BUS		
C 12.2			SUM 55.0			X			SPD		
36.6 TOTAL									SERVICE ENTRANCE		

PANEL DESIGNATION			TYPE: NUMBER OF POLES: 30 MAIN BUS RATING: 100A MAIN RATING: 100A			LOCATION: METHANOL PUMP SHED VOLTAGE: 208Y/120V, 3Ø, 4W PANEL MOUNTING: SURFACE PANEL ENCLOSURE: NEMA 7 PANEL MIN AIC RATING: 42 KAIC					
DNLP-2											
CKT. NO.	CKT. BKR.	DESCRIPTION	LOAD - KVA			LOAD - KVA			DESCRIPTION	CKT. BKR.	CKT. NO.
			A	B	C	A	B	C			
1	20/1	EXHAUST FAN METHANOL SHED	1.9			0.1			INTERIOR LIGHT METHANOL SHED	20/1	2
3	20/1	EXTERIOR LIGHT METHANOL SHED		0.1			0.3		PE-4	20/1	4 *
5 *	20/1	PE-5			0.3		0.2		RECEPTACLE METHANOL SHED	20/1	6
7	20/1	METHANOL REMOTE PANEL							SPARE	20/1	8
9 *	20/1	HEAT TRACE No.2 FOR EYEWASH							HEAT TRACE No.1 FOR EYEWASH	20/1	10 *
11	20/1	SPARE							SPARE	20/1	12
13	20/1	SPARE							SPARE	20/1	14
15	20/1	SPARE							SPARE	20/1	16
17	20/1	SPARE							SPARE	20/1	18
19	20/1	SPARE							SPARE	20/1	20
21	20/1	SPARE							SPARE	20/1	22
23	20/1	SPARE							SPARE	20/1	24
25	20/1	SPARE							SPARE	20/1	26
27	20/1	SPARE							SPARE	20/1	28
29	20/1	SPARE							SPARE	20/1	30
TOTAL			1.9	0.1	0.3	0.1	0.3	0.2	TOTAL		
PANEL CONNECTED LOAD											
A 2.0			CONTINUOUS AMPS			9.0			X SOLID NEUTRAL BUS		
B 0.4			NON-CONTINUOUS			1.0			X EQUIPMENT GROUND BUS		
C 0.5			SUM			10.0			X SPD		
2.9 TOTAL									SERVICE ENTRANCE		

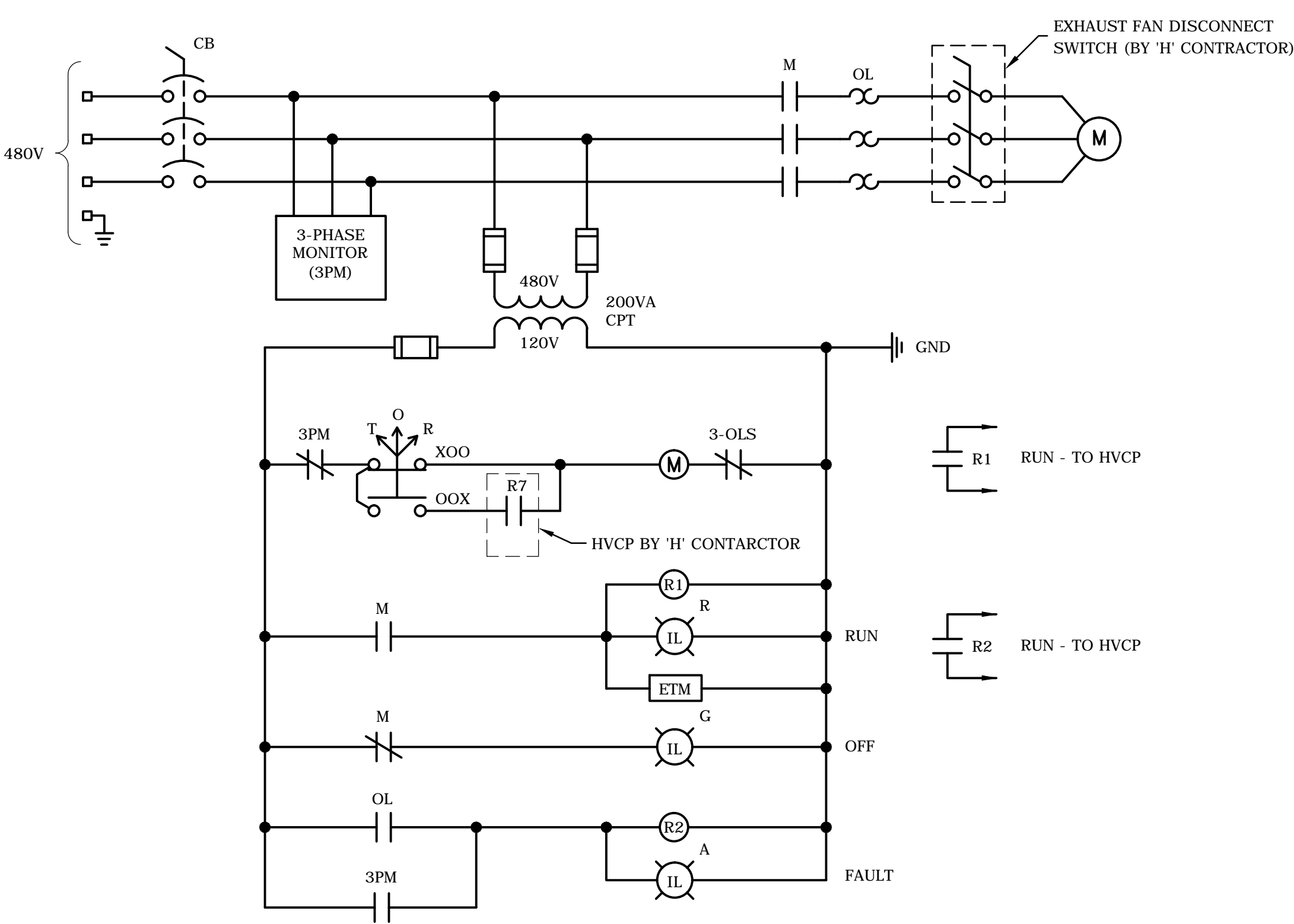
* - SEE NOTE 1

PANEL DESIGNATION			TYPE: NUMBER OF POLES: 42 MAIN BUS RATING: 225A MAIN RATING: 225A			LOCATION: DENITE FACILITY ELECTRICAL ROOM VOLTAGE: 480Y/277V, 3Ø, 4W PANEL MOUNTING: SURFACE PANEL ENCLOSURE: NEMA 12 PANEL MIN AIC RATING: 65 KAIC					
DNHP-2											
CKT. NO.	CKT. BKR.	DESCRIPTION	LOAD - KVA			LOAD - KVA			DESCRIPTION	CKT. BKR.	CKT. NO.
			A	B	C	A	B	C			
1			0.6			0.6					2
3	20/3	MOV NV-623A		0.6			0.6		MOV NV-624A	20/3	4
5					0.6			0.6			6
7			0.6			0.6					8
9	20/3	MOV NV-623B		0.6			0.6		MOV NV-624B	20/3	10
11					0.6			0.6			12
13			0.6			0.6					14
15	20/3	MOV NV-633B		0.6			0.6		MOV NV-634B	20/3	16
17					0.6			0.6			18
19			0.6			0.6			MOV NV-634A	20/3	20
21	20/3	MOV NV-633A		0.6			0.6				22
23					0.6			0.6			24
25			0.6			0.6			MOV NV-644	20/3	26
27	20/3	MOV NV-643		0.6			0.6				28
29					0.6			0.6			30
31											32
33	20/3	SPARE							SPARE	20/3	34
35											36
37											38
39	20/3	SPARE							SPARE	20/3	40
41											42
TOTAL			3.0	3.0	3.0	3.0	3.0	3.0	TOTAL		
PANEL CONNECTED LOAD											
A 6.0			CONTINUOUS AMPS 0.0			X			SOLID NEUTRAL BUS		
B 6.0			NON-CONTINUOUS 22.0			X			EQUIPMENT GROUND BUS		
C 6.0			SUM 22.0			X			SPD		
18.0 TOTAL									SERVICE ENTRANCE		



VFD WIRING DIAGRAM C

TYPICAL FOR:
AERATOR No. 1
AERATOR No. 2
AERATOR No. 3
AERATOR No. 4
AERATOR No. 5
AERATOR No. 6
RAS PUMP No. 1A
RAS PUMP No. 1B
RAS PUMP No. 2A
RAS PUMP No. 2B



FVNR STARTER WIRING DIAGRAM D

TYPICAL FOR:
HV-3
HV-4
HV-6
HV-30
F-11
F-13
F-16
F-30
F-31
F-32

08/07/12 4:36pm FILE= K:\PROJECTS\45000\44761\Design\WWTP Upgrade\ELECTRICAL\c-b8 Wiring Diag c.dwg by MOHERTY XREFs=WWTP Title.



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No.	DESCRIPTION	DATE	BY
2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH

DRAWN	SCALE
MJD	NONE
DESIGNED	JOB No.
TAP	45761.204
APPROVED	DATE
SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

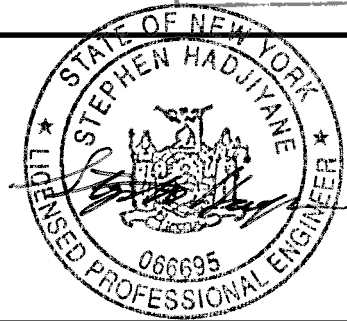
PROJECT
SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWTP IMPROVEMENTS
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
TYPICAL PROCESS
MOTOR CONTROL WIRING DIAGRAM
SHEET 4

SHEET No.

E-68

08/07/12 4:36pm FILE= K:\PROJECTS\45000\45761\Design\WMP Upgrade\ELECTRICAL\E-80 LV Switchgear Sec 2 Bur.dwg by MOHERTY XREFs=WWP Title.



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No.	DESCRIPTION	DATE	BY
2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH
REVISIONS			

DRAWN	SCALE
MJD	NONE
DESIGNED	JOB No.
TAP	45761.204
APPROVED	
DATE	
SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA

WOODBURY, NEW YORK

PROJECT
**SUFFOLK COUNTY SEWER DISTRICT 21
SUNY STONY BROOK WWP IMPROVEMENTS**
SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT No. 8121
CONTRACT No. 4 - 8121E ELECTRICAL

TITLE
**LV SWITCHGEAR
CONTROL MODIFICATIONS
SECTION 2 UTILITY BREAKER**

SHEET No.

E-80

THIS DRAWING NOT TO SCALE	REV. 016603684	AKD-B SWITCHGEAR SECTION 2	WINDOW NO. 2
CONT. ON SH. 102 SH. NO. 101		REQ. 333-98341	S.O. 916480

SECTION 2

---CUST REM---
XC
1-2BD A2
2-2BD B1
3-2BD B5

XE
1-2BD A5
2-2CD A6
3-2CD B1
4-2CD A7

XG
1-2BD A5
2-2BD A6
3-2BD B1
4-2BD A7

---SECTION---
BD
A1-2B 1
A2-2XC 1
A3-2BD 2
A4-2B 8
A5-2BD B7
A6-2T 12F
A7-2T 11F
B1-2XC 2
B5-2XC 3
B6-2T 9F
B7-2BD A5
B7-2BD C5
C4-2T 13F
C5-2BD B7
C5-2B 4
C6-2T 25F
C7-2T 26F

BE
1-2T 7F
2-2BD C7
2-2T 24F
SF
3-2BF 12#12
3-2BF 8#12
4-2T 2F
7-2T 14F
8-2BF 3#12
8-2T 1F#12
11-2T 23F
12-2BF 3#12
12-2D 1#12
CD
A1-2C 4
A2-2CD A4
A3-2C 5
A4-2CD A2
A4-2DD A2
A5-2XE 1
A6-2XE 2
A7-2XE 4
B1-2XE 3
CF
3-2CF 12#12
3-2CF 8#12
4-2C 3
7-2T 17F
8-2CF 3#12
8-2C 1#12
11-2T 19F
12-2CF 3#12
12-2S 2#12
DD
A1-2D 3
A2-2CD A4
A2-2DD A4
A3-2D 4
A4-2DD A2
A4-2DD 3F
A5-2XG 1
A6-2XG 2
A7-2XG 4
B1-2XG 3
DF
3-2DF 12#12
3-2DF 8#12
4-2D 2
7-2T 18F
8-2DF 3#12
8-2D 1#12
11-2T 21F
12-2G 3#12
12-2DF 3#12
---INST TRAY B---
FW
1-2FX 1

2-2B 1
2-2B 2
3-2FX 3
4-2B 8

FX
1-2FW 1
1-2B 6
2-2B 3
3-2FW 3
3-2B 7
4-2B 4
4-2B 5

---INST TRAY C---
GN
1-2GS 2#12
2-2C 2
8-2C 7
9-2GS 1
10-2C 3
GS
1-2GN 9
2-2GN 1#12
2-2C 1#12
GT
1-2GT 3
2-2BU 1
3-2ST 1
3-2CX 2
4-2GU 3

GU
1-2GT 2
2-2C 5
3-2GT 4
4-2C 4
GX
1-2C 6
2-2GT 3

---INST TRAY D---
HN
1-2HS 2#12
2-2D 8
8-2D 7
9-2HS 1
10-2D 2
HS
1-2HN 9
2-2HN 1#12
2-2D 1#12
HT
1-2HT 3
2-2HU 1
3-2HT 1
3-2HX 2
4-2HU 3
HU
1-2HT 2
2-2D 4
3-2HT 4
4-2D 3
HX
1-2D 5
1-2D 6
2-2HT 3

---INST DOOR---
KA
1-2KB 1
2-2KA 10#12
2-2KB 10#12
3-2T 18F
4-2T 22F
7-2T 21F
8-2T 20F
9-2KB 9
10-2KA 2#12
KB
1-2KA 1
1-2T 3F
2-2KB 10#12
2-2T 4F#12
3-2T 17F
4-2T 16F
7-2T 19F
8-2T 15F
9-2KA 9
9-2T 5F
10-2KA 2#12
10-2KB 2#12

---BUS CONN---
G
1-2BF 12#12
2-2CF 12#12
3-2DF 12#12

W
7-1RG 1#8
6-1RF 3#8
9-1RG 3#8
10-1RD 1#8
11-1RD 3#8
12-1RD 5#8

---CNTL BUS---
QA
1F-2D 6
1F-2B 6
1R-3QA 1R
2F-2B 7
2R-4QA 5A#8
3F-2DD A4
3R-1QA 3R#8
3R-3QA 2R#8

---INS TRAY TRM BD---
B
1-2BD A1
1-2FW 2
2-2FW 2
2-2T 4F
3-2FX 2
3-2T 8F
4-2BD C5
4-2FX 4
5-2FX 4
5-2T 10F
6-2FX 1
6-2QA 1R
7-2FX 3
7-2QA 2R
8-2BD 4
8-2FW 4

C
1-2CF 8#12
1-2GS 2#12
2-2GN 2
2-2T 16F
3-2CF 4
3-2GN 10
4-2CD A1
4-2GU 4
5-2CD A3
5-2GU 2
6-2GX 1
6-2D 3
7-2GN 8
7-2T 15F

D
1-2DF 8#12
1-2HS 2#12
2-2DF 4
2-2HN 10
3-2DD A1
3-2HU 4
4-2DD A3
4-2HU 2
5-2C 4
5-2HX 1
6-2HX 1
6-2QA 1F
7-2HN 8
7-2T 20F
8-2HN 2
8-2T 22F

---T POINT---
T
1F-2BF 8#12
1R-1T 1R#12
2F-2BF 4
2R-1T 2R
3F-2XG 1
3R-1T 6R
3R-3T 1R
4F-2KB 2#12
4R-1T 7R#12
4R-3T 3R#12
5F-2KB 9
5R-1T 8R
5R-3T 5R
6F-2B 2
6R-1T 9R
7F-2B 1
7R-1T 11R
7R-5T 22R
8F-2B 3
8R-1T 13R

AKD-B SWITCHGEAR SECTION 2			
MADE BY: H.R. WESELY	SLMHL 032406445		
DATE: 11/2/87	REQ. 333-98341	S.O. 916480	
ENGR: DAN	APPRVLS: SWGR	016603684	
ISSUED: 7/90	BURLINGTON, IOWA	CONT. ON SH. 102 SH. NO. 101	



```

-----CNTL BUS-----
16F-3CF 7
16F-3K3 7
19F-5B2 11
19R-6T 12F
22F-5B2 7
20R-6T 11R
21F-5B2 2
21R-2T 28F
22F-5B2 C6
22R-2T 7R
23F-5B2 C7
23R-2T 24R

-INS TRAY TRM B3-
1-5BD A1
1-5FW 2
2-5FW 2
2-5T 6F
3-5FW 2
3-5T 9F
4-5QA 1R
4-5FW
5-5QA 2R
5-5FW 3
6-5BD A4
6-5FW 1
7-5BD A5
7-5FX

C
1-SCF B#12
1-SGS 2#12
2-SCF 1
2-SGN 10
3-SCD A1
3-5GU 1
4-SCD C2
4-5GU 1
5-5GX 1
5-5D 5
6-SGN B
6-5T 13F
7-SGN 2
7-5T 16F

D
1-5DF B#12
1-SHS 2#12
2-5DF 4
2-SHN 10
3-5DD A1
3-SHU 4
4-5DD F5
4-SHU 2
5-5C 5
5-SHX 1
6-SHX 1
6-5QA 1F
7-SHN B
7-5T 13F
8-SHN 2
8-5T 17F

-----T POINT-----
7
1F-5BF B#12
1R-6T 11R#12
2F-5BF 4
2R-6T 2R
3F-5K3 1
3R-4T 11R
3R-6T 13R
4F-5K3 2#12
4R-4T 2R#12
4R-6T 4R#12
5F-5K3 9
5R-4T 13R
5R-6T 5R
6F-5B 2
6R-1T 110R
6R-6T 16R
7F-5B2 1
7R-1T 12R
7R-6T 7R
8F-5B 3
8R-6T 10R
9F-5B2 A7
9R-6T 9R
10F-5B2 B6
10R-6T 10R
11F-5DF 11
11F-5KA 7
12F-5JF 7
12F-5KA 3
13F-5KA 8
13F-5U 7
14F-5CF 7
14R-5K3 3
15F-5K3 8
15F-5D 4
16F-5K3 4
16F-5C 7
17F-5KA 4
17F-5D 8

AKD-8 SWITCHGEAR
SECTION 1

```

REV.	
1	2
3	4

AKD-8 SWITCHGEAR			
SECTION 5			
MADE BY: H.R. WESELY		SUMM. 0324P6445	
DATE: 11/2/07		REQ. 333-98341 S.D. 916408	
ENGINEER:	APPROVALS:	SWGR 0166D3684	
ISSUED:	BUR. INGTON, TOYA CONT. ON SH. 105 SH. NO. 104		



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2	ADDENDUM No. 1	8/12	LA
1	FOR BID	6/12	SH
No.	DESCRIPTION	DATE	BY
REVISIONS			

DRAWN	SCALE
MJD	NONE
DESIGNED	JOB No.
TAP	45761.204
APPROVED	DATE
SH	JUNE 2012



Gannett Fleming

HARRISBURG, PENNSYLVANIA	WOODBURY, NEW YORK
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PROJECT **SUFFOLK COUNTY SEWER DISTRICT 21**
SUNY STONY BROOK WWTP IMPROVEMENTS
 SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS
 CAPITAL PROJECT No. 8121
 CONTRACT No. 4 - 8121E ELECTRICAL

TITLE	<p align="center"> LV SWITCHGEAR CONTROL MODIFICATIONS SECTION 5 GENERATOR BREAKER </p>
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SHEET No.

E-81